



Improving Mathematical Practices 2012 Conference



**March 8-9
Lexington, Kentucky**



Welcome to the 2012 KCM Conference

The Kentucky Center for Mathematics' faculty and staff take great pleasure in welcoming you to the 2012 KCM Conference. It is our hope that the conference provides you the opportunity to share your expertise with others and to learn from your peers. The KCM remains committed to supporting mathematics instruction throughout the Commonwealth by offering a variety of professional development opportunities that truly focus on effective ways to support and develop educators. Facilitating teacher growth and learning is of paramount importance to us.

*Enjoy the Conference!
The KCM Faculty and Staff*

Alice Gabbard

Laura Bristol

Cindy LaFreniere

Kirsten Fleming

Julia Sullivan

Jill Parker

Jennifer Hernandez-Lamb

Jonathan Thomas

Linda West

Jennifer Taylor

Visit the KCM website where you will find many tools and resources for teachers, parents, and students.

www.kymath.org



2012 KCM Conference Schedule At-A-Glance

Thursday Morning

7:30 am – 8:30 am			
Registration		Conference Registration	Atrium (2 nd Floor)

8:30 am – 9:40 am			Session 1
Opening Session	P-16	The SMP are Essential for Mathematics Proficiency - Elam, A. Hunter , S. Hunter, Schack	Salons A, B & C

10:00 am – 11:10 am			Session 2
70 Minute Sessions	P-2	It's not as Easy as 1-2-3: the Complexities of Early Mathematics - McCray	Magnolia (1 st floor)
	3-5	Addition & Subtraction Fact Fluency: A Progression of Sense-Making that Makes Sense - Kinsey	Salon A
	6-8	They Don't Do Math Like That Anymore! - Laws	Salon B
	3-12	Technology & Pop Culture in the Classroom - Atwood	Salon C
	9-12	PIMSER - Teaching & Learning Mathematics by Solving Rich Problems - Moore	Salon D
	8-12	Multiplying & Dividing Polynomials: A Model for All Students - Schneider	Bluegrass
	P-5	Think INSIDE the Box - Place Value Understanding & Area Model of Multiplication - Reister	Triple Crown
	9-16	College & Career Readiness: Targeted Transitional Interventions - Patterson	Crimson Clover

11:20 am – 12:30 pm			Session 3
70 Minute Sessions	9-16	Turn on Common Core Math: The Role of Learning Progressions - Confrey	Magnolia (1 st floor)
	3-5	A Roadmap for Understanding Fractions - McPherson	Salon A
	P-5	Developing “Operation Sense” - Emmert	Salon B
	3-5	PIMSER - Extreme Makeover for Traditional Problems - Pitts	Salon D
	P-12	Modeling Mathematics for All Grade Levels Using Literature - Woodruff	Blackberry
30 Minute Sessions	11:20 am – 11:50 am		Session 3A
	P-2	Enhancing Fluency with Addition & Subtraction Facts - Osborne	Salon C
	P-5	The Madison County Add+Vantage - Gross	Bluegrass
	6-12	Identifying Gaps in Your School Using EXPLORE & PLAN Data - Rose	Triple Crown
	6-8	See Blue Mathematics Clinic - Mohr-Schroeder	Crimson Clover
	12:00 pm – 12:30 pm		Session 3B
	P-2	Shaping Up the New Standards - Estes	Salon C
	P-5	Digging Deeper with Simple Stories - Rowland	Bluegrass
	9-12	I Have Never Walked Around the Moon - Ghee	Triple Crown
	6-8	Investigating Students’ Spatial Visualization and Scientific Development - Wilhelm	Crimson Clover

2012 KCM Conference Schedule At-A-Glance

Thursday Afternoon

12:30 pm – 1:30 pm	
Lunch	See page 7 of this Conference Program for restaurant options within walking distance.

1:30 pm – 2:40 pm			Session 4
70 Minute Sessions	7-12	Implementing the Common Core State Standards for Secondary Mathematics, 7-12 - Findell	Magnolia (1 st floor)
	3-5	Computational Fluency with Multi-digit Addition and Subtraction: What Lies Beneath? - MacCarty	Salon A
	P-2	Covering vs. Uncovering Primary Math Content - Slone	Salon B
	6-8	PIMSER - Functions Come to the Middle School - Beswick	Salon D
	P-5	Core Instruction - Foundational Practices in Elementary Math - Black	Bluegrass
30 Minute Sessions	1:30 pm – 2:00 pm		Session 4A
	P-5	Using Microsoft Excel to Manage Student Data - Neel	Salon C
	P-5	Access to Algebra: Helping K-5 Students Develop Relational Thinking - Jong	Triple Crown
	9-16	Your Students Can Be “Mathletes”: Facilitating Student Perseverance in Difficult Mathematical Thinking - Phelps	Blackberry
	2:10 pm – 2:40 pm		Session 4B
	P-5	How Do I Know I am Teaching All of the Standards? - Thompson	Salon C
	3-5	New Dreambox Learning for Intermediate Grades - Farmer	Triple Crown
	9-16	The Effects of a Non-Traditional Approach to Teaching Introductory Statistics - Autin	Blackberry

2:50 pm – 4:00 pm			Session 5
70 Minute Sessions	3-5	Connecting Teaching and Learning Fractions - Gould	Magnolia (1 st floor)
	P-2	Exploring Numeracy Throughout the Day - Pray	Salon A
	6-8	Middle School Mathematics Intervention Activities for Developing Numeracy - West	Salon B
	6-12	PIMSER - Improving Mathematical Practices in a MathNspired Classroom - Casey	Salon D
	9-16	Accessing the Mathematics Behind Calculator-Generated Linear Regression Lines - Bristol	Bluegrass
	K-9	K-9 Transition Program - Phipps	Triple Crown
30 Minute Sessions	2:50 pm – 3:20 pm		Session 5A
	6-8	Creating Assessments Aligned with the CCSS - Schroeder	Salon C
	3:30 pm – 4:00 pm		Session 5B
	P-16	Pursuing a Graduate Degree in STEM Education: The Facts and Myths - Fisher	Salon C

Vendors	
	Please visit our vendors located on the 2 nd floor near the elevators.

2012 KCM Conference Schedule At-A-Glance

Friday Morning

8:30 am – 9:40 am			Session 6
70 Minute Sessions	3-5	Using Assessment to Support Effective RtI Systems - Woodward	Magnolia (1 st floor)
	9-16	An Introduction to Randomization Tests: Using Simulations to Determine Significance - Buckley	Salon A
	6-8	Using Virtual Manipulatives to Solve Equations - Magruder	Salon B
	9-12	Modeling with Mathematics in High School - Hunter	Salon C
	P-2	Making Math Magic - Developing Understanding of Addition & Subtraction - Allen Burns	Salon D
	9-16	Patterns & Problem Solving - Recurring Themes throughout the Curriculum - Schiffman	Bluegrass
	P-12	CIITS: Implementing the KCAS Using Highly Effective Mathematics Teaching & Learning Through Technology - Sears * (change in presenter)	Triple Crown

10:00 am – 11:10 am			Session 7
70 Minute Sessions	P-12	* Teacher Education in the Era of the Common Core: Engaging in Mathematical Practices as a Teacher and Learner - Steele * (see note below)	Magnolia (1 st floor)
	P-5	Adapting Small Group Activities to a Whole Group Setting - Brewer	Salon A
	3-4	Making Math Magic - Learning Fractions in Grades 3 & 4 Through the SMP - Stamm	Salon D
	P-5	Pacing Yourself with the New Standards - Blevins	Triple Crown
30 Minute Sessions	10:00 am – 10:30 am		Session 7A
	3-8	Games in the Middle School: Things to Consider - Jackson	Salon B
	P-5	Move It! - Horn	Salon C
	P-2	RTI - Reaching The Individual - Adams	Bluegrass
	P-2	Using Reading to Teach Math, Can it Work? -Terry	Crimson Clover
	10:40 am – 11:10 am		Session 7B
	6-12	Students Using Assessments to Focus Their Learning - Wilson	Salon B
	P-2	How to Handle Those Rebellious Teens - Rush	Salon C
	P-2	Place Value: Why is it so Puzzling? - Tatman	Bluegrass

11:20 am – 12:30 pm			Session 8
70 Minute Sessions	8-12	Reasoning and Making Sense for Algebra - Cuoco	Magnolia (1 st floor)
	P-5	Let's Go on a Fluency Hunt! - Reister	Salon A
	3-8	Developing Multiplication & Division Operations for Whole Numbers, Decimals & Fractions through Conceptual Understanding - Waggoner	Salon B
	K-2	Singapore Math - Gabbard	Salon C
	6-12	Making Math Magic - Transformations in Geometry: Using the Standards for Mathematical Practice #1 - Booth	Salon D
	P-5	Getting Students on the Road to Fluency with Number and Operations - Jewell	Bluegrass
	6-8	Making Sense of the Middle School Statistics Standards - Durham	Triple Crown

* New time - This session was originally scheduled for 1:30 pm on Friday. *

2012 KCM Conference Schedule At-A-Glance

Friday Afternoon

12:30 pm – 1:30 pm			
Lunch	See page 7 of this Conference Program for restaurant options within walking distance.		

1:30 pm – 2:40 pm			Session 9
70 Minute Sessions	9-16	** Pythagorean Triples and the Unit Circle - Noblitt ** (see note below)	Magnolia (1 st floor)
	6-12	Using the 5E Lesson Model to Implement the SMP - Everett	Salon A
	P-8	Why Ask? - Morgan	Salon B
	P-5	Real World Problem Solving in Operations and Algebraic Thinking - Sears	Salon C
	5-6	Making Math Magic - Learning Fractions in Grades 5 & 6 Through the SMP - Stamm	Salon D
	3-12	How Kentucky Student Score Reports Inform Mathematical Instruction - Hudnutt	Bluegrass
	P-5	Centered Mathematics - Montgomery	Triple Crown

2:50 pm – 4:00 pm			Session 10
70 Minute Sessions	P-12	“Cooking Up” (Student Engagement)^2 - Berry	Salon A
	6-12	Making Math Magic - Geometry and the ACT through the SMP - Pickett	Salon D
	P-8	Bringing in The Math Workshop - Caudle	Bluegrass

30 Minute Sessions	2:50 pm – 3:20 pm		Session 10A
	P-5	Math is Special - Oliver	Magnolia (1 st floor)
	P-2	Making Standards Meaningful and Manageable in 2 nd Grade - Carroll	Salon B
	9-16	Fourth Year Math Course - Patterson	Salon C
	P-5	Enriching Math with the Real World - Dicken	Triple Crown
	3:30 pm – 4:00 pm		Session 10B
	P-5	Classroom Number Talks - Rogers	Magnolia (1 st floor)
	P-2	Developing Place Value Concepts - Gary	Salon B
	6-16	Tips for Educators to Help Students Overcome Math Anxiety - Miller	Salon C
	P-5	Having Fun with G.A.M.E.S (Games About Math; Educating Students) - Owens	Triple Crown

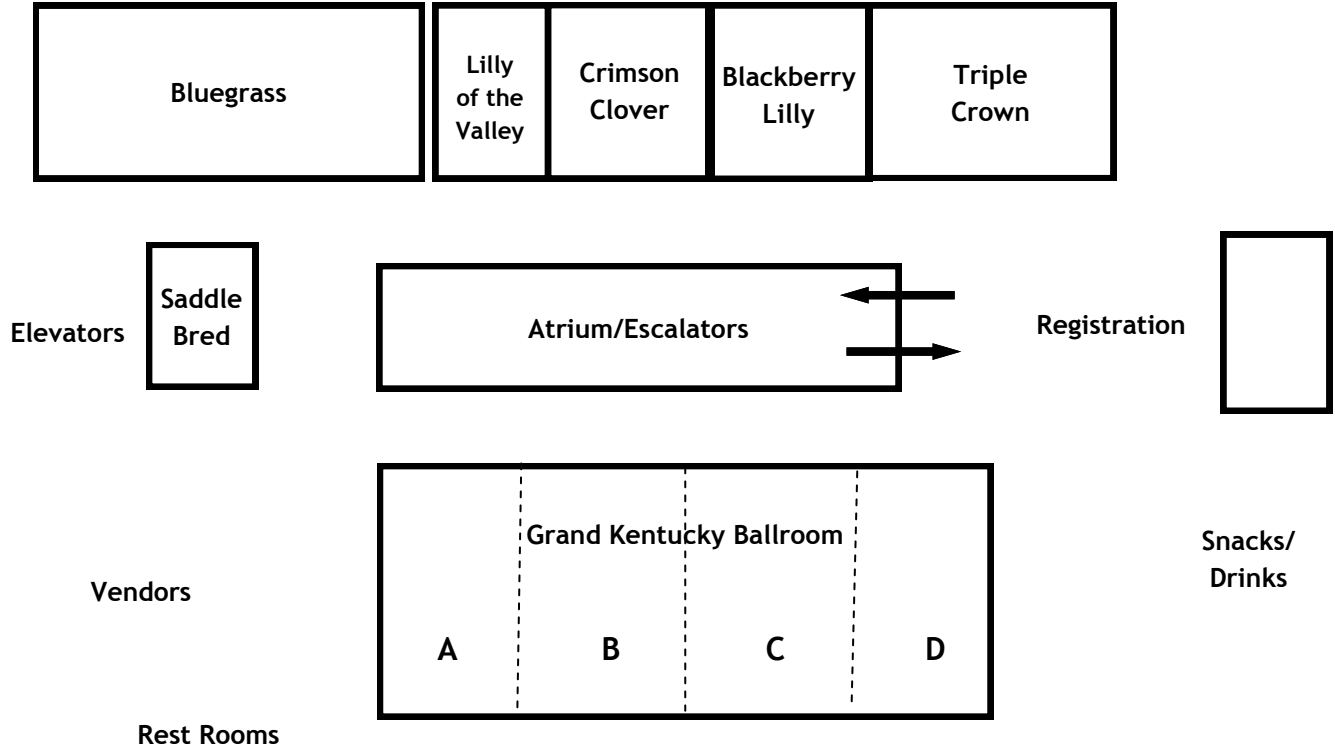
Vendors	Please visit our vendors located on the 2 nd floor near the elevators.
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** New time - This session was originally scheduled for 10:00 am on Friday. **

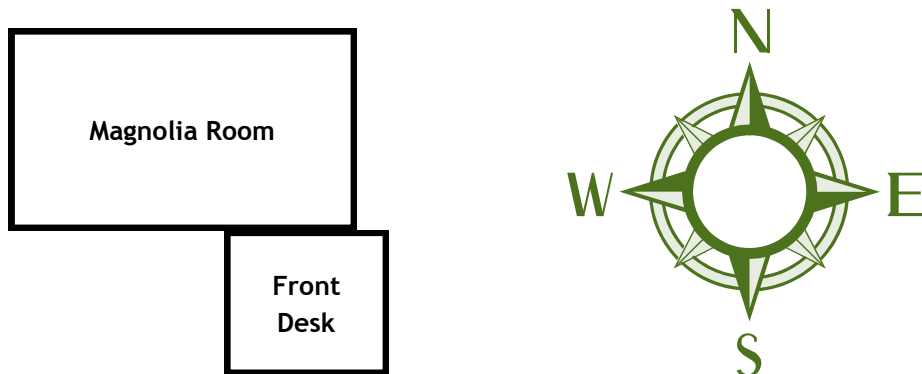


2012 KCM Conference Map

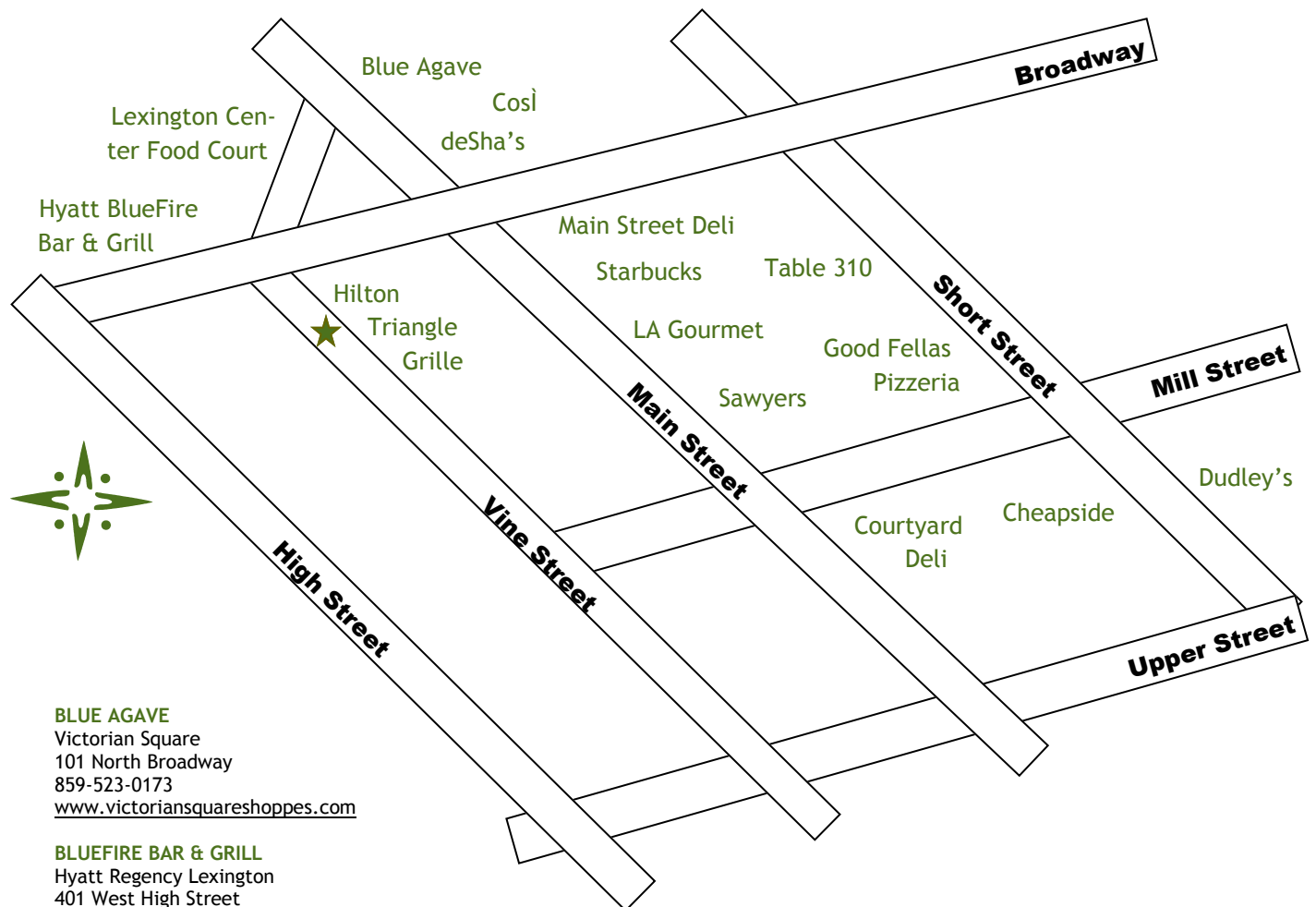
Second Floor



First Floor



Some Downtown Dining Options



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Victorian Square
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BLUEFIRE BAR & GRILL

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www.lexington.hyatt.com

CHEAPSIDE BAR & GRILL

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859-254-0046
www.cheapsidebarandgrill.com

COSI

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859-381-8503
www.getcosi.com

COURTYARD DELI

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859-252-3354

deSHA'S RESTAURANT & BAR

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101 North Broadway
859-259-3771
www.deshas.com

DUDLEY'S RESTAURANT

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859-252-1010
www.dudleysrestaurant.com

LA GOURMET

325 West Main St.
859-253-5247
www.kylagourmetpizza.com

MAIN STREET DELI

380 West Main St.
859-225-0262
www.msdeli.com

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Mr. Kan's Chinese
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TABLE THREE TEN

310 West Short Street
859-309-3901
www.table310.com

STARBUCKS

325 West Main Street

TRIANGLE GRILLE

Hilton Lexington Downtown
369 West Vine Street
859-281-3773
www.trianglegrille.com

For other dining options, please visit the touch screen located next to the front desk on the first floor.

Or download the *Big Lex City Guide* app on your smartphone.

Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of **expertise that mathematics educators at all levels should seek to develop in their students**. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Make sense of problems and persevere in solving them.

Mathematically proficient students:

- analyze givens, constraints, relationships, and goals
- make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt
- consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution
- monitor and evaluate their progress and change course if necessary

Reason abstractly and quantitatively.

Mathematically proficient students:

- make sense of quantities and their relationships in problem situations
- bring two complementary abilities to bear on problems involving quantitative relationships:
- the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and
- the ability to *contextualize*—to pause as needed during the manipulation process in order to probe into the referents for the symbols involved
- create a coherent representation of the problem at hand
- consider the units involved attending to the meaning of quantities, not just how to compute them
- knowingly and flexibly use different properties of operations and objects

Construct viable arguments and critique the reasoning of others.

Mathematically proficient students:

- understand and use stated assumptions, definitions, and previously established results in constructing arguments
- make conjectures and build a logical progression of statements to explore the truth of their conjectures
- justify their conclusions, communicate them to others, and respond to the arguments of others
- can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments

For more information visit: <http://www.corestandards.org/the-standards/mathematics/introduction/standards-for-mathematical-practice/>



Standards for Mathematical Practice

Model with mathematics.

Mathematically proficient students:

- can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace
- are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later
- are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts, and formulas
- can analyze those relationships mathematically to draw conclusions
- routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose

Use appropriate tools strategically.

Mathematically proficient students:

- consider the available tools when solving a mathematical problem, including: pencil and paper, concrete models, ruler, protractor, calculator, spreadsheet, computer programs, or content located on a website
- are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations
- when making mathematical models, know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data

Attend to precision.

Mathematically proficient students:

- communicate precisely by using clear definitions in discussion with others and in their own reasoning
- state the meaning of the symbols they choose, including using the equal sign consistently and appropriately
- are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem
- calculate accurately and efficiently and express numerical answers with a degree of precision appropriate for the problem context

Look for and make use of structure.

Mathematically proficient students:

- look closely to discern a pattern or structure
- can also step back for an overview and shift perspective
- can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects

Look for and express regularity in repeated reasoning.

Mathematically proficient students:

- notice if calculations are repeated and look both for general methods and for shortcuts
- maintain oversight of the process as they work to solve a problem while attending to the details
- continually evaluate the reasonableness of their intermediate results



Featured Speakers



**Jere Confrey,
North Carolina State University**

Dr. Jere Confrey is the Joseph D. Moore Distinguished Professor of Mathematics Education at North Carolina State University. She is designing diagnostic assessments for rational numbers and learning trajectories using wireless devices. She served on the National Validation Committee on the Common Core Standards. She was Vice Chairman of the Mathematics Sciences Education Board, National

Academy of Sciences (1998-2004). She chaired the NRC Committee, which produced *On Evaluating Curricular Effectiveness*, and was a coauthor of NRC's *Scientific Research in Education*. She was a co-founder of the UTEACH program for secondary math and science teacher preparation at the University of Texas in Austin and was the founder of SummerMath program for young women at Mount Holyoke College and co-founder of SummerMath for Teachers. Dr. Confrey received a Ph.D. in mathematics education from Cornell University.



**Al Cuoco,
Center for Mathematics Education at Education Develop-
ment Center**

Al Cuoco is Distinguished Scholar and Director of the Center for Mathematics Education at Education Development Center. He is lead author for "The CME Project," an NSF-funded high school curriculum, published by Pearson. He also co-directs "Focus on Mathematics," a partnership among universities,

school districts, and EDC that has established a community of mathematical practice involving mathematicians, teachers, and mathematics educators. The partnership evolved from his 25-year collaboration with Glenn Stevens on Boston University's "PROMYS for Teachers," a professional development program for teachers based on an immersion experience in mathematics. Al taught high school mathematics to a wide range of students in the Woburn, Massachusetts public schools from 1969 until 1993. A student of Ralph Greenberg, he holds a Ph.D. in mathematics from Brandeis, with a thesis and research in Iwasawa theory. He draws constantly on his experience both as a mathematician and a teacher in his work in curriculum development, professional development, and education policy, most recently as part of a team revising the CBMS recommendations for teacher preparation and professional development. His recent book, published by MAA, is "Mathematical Connections: a Companion for Teachers and Others," but his favorite publication is a 1991 paper in the American Mathematical Monthly, described by his wife as "an attempt to explain a number system that no one understands with a picture that no one can see."



Featured Speakers

Bradford Findell, Mathematical Education Consultant

Bradford Findell provides consulting services in mathematics education, focusing in particular on the implementation of the Common Core State Standards. He was a member of the Mathematics Work Team for the Common Core State Standards and is Past President of the Association of State Supervisors of Mathematics. Previously, Brad was the Mathematics Initiatives Administrator at the Ohio Department of Education, providing mathematics education leadership and bringing Ohio's best work onto the national stage. Before moving to Ohio, he was on the faculty in mathematics education at the University of Georgia, where he became deeply involved in drafting, revising, elaborating, and implementing the Georgia Performance Standards in mathematics. He has also served as a staff member at the National Research Council, working on various mathematics education projects including Adding It Up: Helping Children Learn Mathematics, a synthesis of the research literature on the teaching and learning of mathematics in grades K-8. He has taught mathematics courses and lessons in elementary through graduate school, focusing mostly on high school and undergraduate mathematics and on the preparation and professional development of teachers.

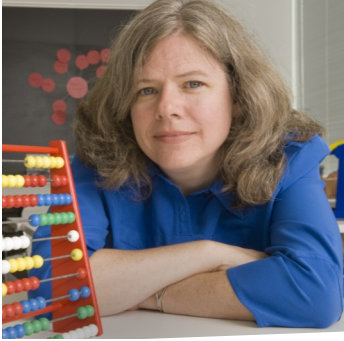


Peter Gould, Group Leader of Mathematics and Numeracy, NSW Australia

Peter Gould is the Group Leader of Mathematics and Numeracy with the Department of Education and Communities, New South Wales Australia. His primary responsibilities are in the design and delivery of effective mathematics curriculum support from kindergarten to Year 12. He is interested in research-based knowledge being used to improve, and being improved by, teaching practice. He taught mathematics classes for 13 years in schools serving disadvantaged communities before working as a K-12 mathematics consultant. He acknowledges that he has been taught many useful things by his students and colleagues over the years. He has written a range of curriculum documents including Problem of the Week, Co-operative Problem Solving in Mathematics Years 5-8, and Fractions: pikelets and lamingtons. Peter has been the chair of several mathematics curriculum committees, and he has helped with the development of the primary mathematics curriculum in Papua New Guinea and the *Count Us In* television series for the Australian Broadcasting Commission. His current research is into how children develop a sense of fractions, as well as what can be learnt from Lesson Study in mathematics.



Featured Speakers



**Jennifer McCray,
Erikson Institute**

Jennifer McCray is an Assistant Research Scientist and the Director of the Early Mathematics Education Project at the Erikson Institute, a graduate school of child development in Chicago. The project provides professional development in early mathematics to more than 120 Chicago Public School teachers each year. Recently, it was awarded a prestigious Investing in Innovation (i3) grant from the Department of Education. Dr. McCray's research focuses on mathematics teaching and learning, teacher professional development, cognitive development, and classroom assessment. Her dissertation, which was funded by the U.S. Department of Health and Human Services, proposed and evaluated a new tool for measuring preschool teachers' pedagogical content knowledge in early mathematics. This study won awards from both the American Educational Research Association and the National Association of Early Childhood Teacher Educators.



**Bethany Noblitt,
Northern Kentucky University**

Bethany Noblitt is an assistant professor of mathematics education at Northern Kentucky University. She received a bachelors degree in mathematics, a teaching certificate in Secondary Mathematics, a masters in teaching and a masters in mathematics from the University of Louisville. She taught at Waggener High School in Louisville, Kentucky before moving to northern Kentucky. She earned a doctorate in interdisciplinary studies in mathematics and education from the University of Cincinnati in 2006. That same year, she began service in her current position at NKU. She teaches courses in mathematics for elementary, middle grades and secondary pre-service teachers. She enjoys exploring mathematics by herself, with her colleagues and with her students. Bethany is currently a co-principal investigator for the PRIME program at NKU, an NSF funded scholarship program for students pursuing a career in teaching secondary mathematics. She has also recently been involved with the Northern Kentucky Math Specialist Project (NKMSP), a three-year project funded by Kentucky Department of Education in which elementary and middle grades teachers from northern Kentucky participated in summer institutes, which focused on mathematics and the teaching of mathematics, and academic-year workshops, which focused on lesson study and leadership. Bethany is also very involved in several professional communities in mathematics education. She is currently the chair of the Affiliate Services Committee of the National Council of Teachers of Mathematics, the past-president of the Kentucky Council of Teachers of Mathematics, and the secretary of the Northern Kentucky Council of Teachers of Mathematics.



Featured Speakers

Michael Steele, Michigan State University

Michael Steele is an assistant professor of mathematics education at Michigan State University, where he directs the secondary mathematics teacher preparation program. Dr. Steele did his doctoral study at the University of Pittsburgh under the direction of Peg Smith; prior to that, he worked as a middle and high school mathematics teacher and curriculum developer in the state of Maryland. His research focuses on knowledge needed for teaching mathematics and the development of that knowledge in pre-service and practicing teachers. His other interests include practice-based teacher education and professional development, the use of cases in teacher education, and the teaching and learning of reasoning and proving.



David Woodward, Boulder Valley School District, Colorado

David Woodward works as a mathematics coach and elementary mathematics specialist for Boulder Valley School District in Colorado. In addition to systems and assessment to support RtI, David is an expert in the role of language in the mathematics classroom and works as a coach at a Title 1 Bilingual dual language immersion program in Lafayette, CO. David is a member of the Colorado Metropolitan Intervention Team and has led the development of a set of universal screeners for elementary mathematics. He also founded the company Forefront Math which designs software to collect and organize assessment data.



2012 KCM Conference Session Details
Session 1 - Opening Session
Thursday 8:30 am – 9:40 am • 70 Minute Session

Session 1 - Opening Session		Thursday 8:30 am – 9:40 am	
Grade Level	Session Topic	Presenters	Location
P-16	The Standards for Mathematical Practice are Essential for Mathematics Proficiency. This session will set the stage and provide context for the conference. The panelists will: give a brief overview of the Standards for Mathematical Practice (SMP); discuss the importance of the SMP; provide audience members with the opportunity to see video-clips of the SMP in action and comment on the content of the clips; and provide information about where the participants can find resources that will assist them in developing within their students the types of expertise called for in the SMP.	Kim Elam, Amy Hunter, Seth Hunter, Edna Schack Panel Moderator: Kirsten Fleming	Salons A, B, and C



2012 KCM Conference Session Details
Session 2
Thursday 10:00 am – 11:10 am • 70 Minute Sessions

Session 2		Thursday 10:00 am – 11:10 am	
Grade Level	Session Topic	Presenters	Location
P-2	It's not as Easy as 1-2-3: The Complexities of Early Mathematics. Exciting work in cognitive developmental psychology has made it clear that young children are more capable of learning about mathematics than we had previously thought. This finding, however, sometimes leads educators to "push down" curriculum intended for older grades, a practice which can frustrate and alienate both teachers and children. This presentation will describe early mathematics, both in terms of what it is and how it can be taught in developmentally friendly ways. Implications for helping primary grade students who are struggling and ideas for classroom activities will be shared.	Jennifer McCray	Magnolia (1 st floor)
3-5	Addition & Subtraction Fact Fluency: A Progression of Sense-Making That Makes Sense. Too many students continue endlessly in using strategies that involve counting by ones to work out basic addition and subtraction facts. Fluency with facts to 20 arises from students' ability to use units other than one. The domain of Structuring Numbers 1 to 20 as described in <i>Developing Number Knowledge</i> , Wright et al., provides the basis for an approach to addition and subtraction fact fluency that gives merit to developing both skills and understanding. Participants will examine a detailed learning trajectory with pedagogical tools to support designing instruction to help students achieve this important goal in mathematics.	Kurt Kinsey, Petey MacCarty	Salon A
6-8	They Don't Do Math Like That Anymore! Do you remember when the only way to solve a math problem was the way a teacher told you to? Do you remember when there was only one correct answer, and if you asked why, you were scolded? Well, not anymore! During this session we are going to explore different methods for solving mathematical situations, moving beyond standard algorithms and into inquiry-based instruction. We will explore using different tools (e.g., manipulatives, SMART notebook, iPads, sound files) to gain a deeper knowledge of the "how's" of math. We will teach you how to effectively implement a variety of technology tools in your mathematics classroom to increase student engagement and achievement.	Molly Laws, David Thomas	Salon B
3-12	Technology and Pop Culture in Classrooms. What do Glee, Will Smith, Mickey Mouse, and Math have in common? Well at first glance, nothing. But using popular cultural icons, movies, dances, music, and other factors, students can learn their mathematical skills by connecting them on a social level not achieved by normal classroom lecture. In this session, participants will learn how to use pop culture and technology to add pizzazz to lessons, get students up and moving, and to connect those important math concepts to the people and things students enjoy every day.	David Atwood	Salon C
9-12	PIMSER - Teaching and Learning Mathematics by Solving Rich Problems. During this session, participants will experience investigating and solving some selected rich problems - both mathematics problems and applications of mathematics. During the solving of the problems, there will be some discussion of (1) how or why a problem may or may not be engaging to a student, (2) how the use of technology such as GeoGebra or SketchUp (both free), graphing calculators or other graphing software or spreadsheets can offer more paths to the problem's solution as well as engage students to the point of sticking with a problem until it is solved, (3) how students can become better problem solvers by getting in the habit of making the connections among equations, verbal descriptions, tables and diagrams or graphs that represent the problem, including dynamic or three dimensional drawings, (4) how students can know when they have correctly solved a problem and (5) where to find rich problems that support learning of the Kentucky Core Academic Standards. This session will encourage teachers to make Mathematical Practices Standards 1 (Make Sense of Problems and Persevere in Solving Them) and 5 (Use Appropriate Tools Strategically) a daily habit of all students. Bring your laptops and/or handheld devices and enjoy!	Jim Moore	Salon D

2012 KCM Conference Session Details

Session 2

Thursday 10:00 am – 11:10 am • 70 Minute Sessions

Session 2 Thursday 10:00 am – 11:10 am			
Grade Level	Session Topic	Presenters	Location
8-12	Multiplying and Dividing Polynomials: A Model for ALL Students. To reach KCAS and Quality Core EOCA expectations, students must perform multiplication and division of polynomials and understand the relationship between zeroes and factors of polynomials. In this session, participants will use an area model representation to help students build a deeper conceptual understanding of this relationship. Teachers will work through examples based on their need to explore the area model and how to apply it to finding the zeroes of quadratics and then with complex higher-order polynomial functions. Study team (cooperative learning) strategies will also be modeled to help students become proficient at the Standards for Mathematical Practice. Take these research-informed strategies back to your Algebra I & II classrooms!	Erin Schneider	Bluegrass
P-5	Thinking INSIDE the Box - Linking Place Value Understanding to the Area Model of Multiplication. The Common Core State Standards place a large emphasis on the area model of multiplication. Teachers need to understand the POWER of this model! It's amazing! In this presentation, we will share a series of hands-on explorations with place value, which leads directly to explorations with the area model of multiplication. We shared these activities during a recent Course 2 AVMR training and would love to share it with others. Participants will leave with handouts of all explorations presented, as well as access to the Prezi shown during the presentation.	Becky Reister, Mary Greene	Triple Crown
9-16	College and Career Readiness: Targeted Transitional Interventions. With recent legislative changes, the transitional intervention requirements are raising many questions for schools and districts across the state. Any junior who does not meet state benchmarks on their ACT assessment is required to have transitional interventions in Mathematics, Reading and/or English in their senior year of high school in order to help reduce college remediation rates and increase college readiness. In this session, the presenter will give members of the audience the legislative overview and background for the transitional course requirements. The presenter will also review the state-sponsored mathematics transitional course curriculum with participants and discuss the variety of options available for implementing transitional interventions in the school setting. The presenter will also discuss the current development of transitional curriculum material to help students who do not meet benchmarks on the EXPLORE exam. Participants will have an opportunity to ask questions as time allows.	Amy Patterson	Crimson Clover



2012 KCM Conference Session Details
Session 3
Thursday 11:20 am – 12:30 pm • 70 Minute Sessions

Session 3				Thursday 11:20 am – 12:30 pm			
Grade Level	Session Topic			Presenters	Location		
9-16	Turn On Common Core Math: The Role of Learning Progressions. This presentation will discuss why the implementation of CCSS-M is NOT business as usual. The presenter will draw attention to new and emphasized topics at each grade band, mathematical practices, learning trajectories, and interdisciplinary content. In the area of implementation, she will discuss course naming, sequencing, phasing, and ways to increase attention to equity and fairness. She will end with a discussion on how new technologies will transform instruction in content, its delivery and the use of data.			Jere Confrey	Magnolia (1st floor)		
3-5	A Roadmap for Understanding Fractions. If students are to develop the skills and habits described in the Standards for Mathematical Practice, they must engage in rich problem solving experiences. With the adoption of the new Common Core State Standards for mathematics, conceptual understanding of fractions will be critical for students in grades 3 - 6. Some students may rely on using concrete objects or drawings/pictures to help conceptualize and solve a problem. This session will utilize concrete models to develop students' knowledge of ideas about fractions. Participants will experience problem solving activities that engage students in a conceptual understanding of fractions. This session will also include the introduction of embedded formative assessment strategies that provide evidence of student insight and misconceptions that can be used by teachers to guide instruction.			Faneshia McPherson	Salon A		
P-5	Developing "Operation Sense." Do the tables in the glossary of the Kentucky Core Academic Standards for Math confuse you? Are you asking yourself, "What tables?" Several standards reference the glossary tables for a deeper understanding of what the standard requires for mastery and for instructional notes for teachers. During this session we will explore basic mathematical operations and will connect their different meanings, interpretations, and relationships with interactive activities. If you are only teaching key words to help students decide which operation to use, come learn about the structures described in Tables 1 and 2 of the Common Core State Standards glossary so that your students develop the true foundation of number sense to solve word problems without the 'tricks' we've tried to use in the past.			Teresa Emmert, Renee Yates	Salon B		
3-5	PIMSER - Extreme Makeover for Traditional Problems. Are your mathematical tasks worthwhile? The Standards for Mathematical Practice are addressed at all levels. What can a teacher do to address these standards without additional funding? Can traditional textbook problems be varied so that they provide opportunities for students to address these standards? Join us as we examine ways to turn traditional textbook problems into open-ended problems, thus making the math classroom more student friendly, and the math tasks more engaging. Leave with ideas of how to modify everyday mathematical tasks, so that students can become actively engaged with the mathematical practices.			Tolene Pitts, Marsha Maupin	Salon D		
P-12	Modeling Mathematics for All Grade Levels Using Children's Literature. Using children's literature to introduce math concepts is nothing new. However, more and more encompass all grade levels. A demonstration will be given of how available children's literature can be utilized to address kindergarten through high school mathematical concepts. Attention will be given to how the focus of the literature should be on the math content discussed in the book and the creativity of the instructor to reinforce it within their classrooms instead of on the readability level of the book.			Jennifer Woodruff	Blackberry Lilly		



2012 KCM Conference Session Details

Session 3A

Thursday 11:20 am – 11:50 am • 30 Minute Sessions

Session 3A		Thursday 11:20 am – 11:50 pm		
30 Minute Sessions	Grade Levels	Session Topic	Presenters	Location
	P-2	Enhancing Fluency with Addition and Subtraction Facts. Are your students struggling with their basic addition and subtraction facts? Every teacher wants students to learn the basic addition and subtraction facts efficiently, become facile with their use, and retain that fluency over time. In this session, you will see how to build a foundation of work with strategies and concepts. You will learn a step-by-step approach to teach addition and subtraction facts rather than requiring students to unsuccessfully memorize the facts. This conceptual foundation will lead to effective learning, better retention, and more efficient mental math skills.	Susie Osborne, Lisa Adams	Salon C
	P-5	The Madison County Add+Vantage. The Madison County School District has been on a three-year journey expanding the dynamic Math Recovery research-based practice into classrooms through Add+Vantage Math Recovery. Find out the trials, tribulations and successes of bringing the Learning Framework in Number to your classroom teachers.	Cindy Gross, Elizabeth Wright	Bluegrass
	6-12	Identifying Gaps in Your School using EXPLORE and PLAN Data. Many reports are available from the EXPLORE and PLAN assessments. This session will show you ways to use the reports to analyze and pinpoint problem areas for your school and students. Identifying these gaps and developing materials to address the gaps early should improve student scores on the ACT as well as move your school and students forward to college and career readiness. The Item Response Summary Report and resources from the ACT website will be used in this session.	Chyleigh Rose	Triple Crown
	6-8	See Blue Mathematics Clinic. The University of Kentucky's See Blue Mathematics Clinic is a resource to the university and surrounding Kentucky communities. University faculty members provide teacher education to future teachers about how to assess and provide differentiated instruction to struggling mathematics students. The clinic also works to develop a partnership with home representatives and students' classroom teachers in order to help the student achieve success in mathematics. The goal of the clinic is to provide free outreach support for students who are struggling in mathematics. The target audience is seventh grade students who have been identified by their teachers as struggling in mathematics. Teachers rely on students' MAP and KCCT scores, students' current grades, and student dispositions in their mathematics classroom as criteria for referring students to participate in the See Blue Mathematics Clinic. Although students in seventh grade are the target audience, students in sixth and eighth grade are able to attend the clinic with their teachers' recommendations. Our goal is to help these students become college & career ready in mathematics and develop confidence in their mathematical abilities. In this session, we will address instructor perceptions of struggling mathematics students and how the clinic impacts student achievement.	Margaret Mohr-Schroeder, Christa Jackson	Crimson Clover



2012 KCM Conference Session Details
Session 3B
Thursday 12:00 pm – 12:30 pm • 30 Minute Sessions

Session 3B		Thursday 12:00 pm – 12:30 pm		
30 Minute Sessions	Grade Levels	Session Topic	Presenters	Location
	P-2	Shaping Up the New Standards. Are you having a difficult time getting your students to count, compare, combine, and take apart numbers? Get some ideas that meet the new standards and are fun for your students. Go away with activities that you can start using Monday.	Jan Estes, Belle Rush, Martha Riley	Salon C
	P-5	Digging Deeper with Simple Stories. Children's literature creates a rich context for exploring deep mathematical ideas and concepts. Participants will browse several children's literature titles that have been used in the math classroom. We will explore ways to go beyond the book with games and models to build a deeper understanding of mathematical ideas. See how titles such as <i>Ten Flashing Fireflies</i> and <i>Two of Everything</i> can be used to build operational strategies and algebraic thinking skills.	Chrystal Rowland	Bluegrass
	9-12	I Have Never Walked Around the Moon. How did we ever determine the radius of the moon? Did we drill through the middle or just moon walk around it? In this presentation, participants will engage in a 5E (engage, explore, explain, elaborate, evaluate) lesson to explore the math behind this science using chords, secants, and tangents to find the radius of their own moon. Math is not just something we teach, but something we need to understand the universe around us. Participants will engage in a 5E lesson that will combine history, science, and mathematics to explore the practicality of chords, secants, and tangents. This will give participants a student-centered approach to teach topics in geometry by engaging students in several of the Standards for Mathematical Practice. Participants will also discover ways to extend on this idea in their own classroom as well as daily life. Let us think not only out of the box, but out of this world.	Tyler Ghee	Triple Crown
	6-8	Investigating Students' Spatial Visualization and Scientific Development as They Engage in an Integrated Mathematics/Science Earth-Space Unit. We describe a study that examined differences between two groups of students' spatial-scientific reasoning from pre to post implementation of an Earth/Space unit. Using a quasi-experimental design, researchers explored how instructional method and gender affected learning. Treatment teachers employed a NASA-based curriculum while the control teacher implemented her regular Earth/Space unit. A Lunar Phases Concept Inventory (LPCI), Geometric Spatial Assessment (GSA), and the Purdue-Spatial Visualization Rotation Test were used to assess learning. Experimental groups made gains on periodicity (LPCI) domains while the control group made gains on geometric spatial visualization (LPCI) domains. Only females made gains on GSA items. This is the first quasi-experimental study to examine students' spatial reasoning as they participate in Earth/Space units and to discover gender's role in this spatial development.	Jennifer Wilhelm, Christa Jackson, Amber Sullivan	Crimson Clover



2012 KCM Conference Session Details
Session 4
Thursday 1:30 pm – 2:40 pm • 70 Minute Sessions

Session 4				Thursday 1:30 pm – 2:40 pm			
Grade Levels	Session Topic			Presenters	Location		
7-12	Implementing the Common Core State Standards for Secondary Mathematics, 7-12. To assist schools and districts preparing to implement the Common Core State Standards, this session will provide resources and strategies for sensible implementation across grades 7-12. With an eye toward college and career readiness for all students, and drawing on the principles of Response to Intervention, the session will focus on recommended changes in curriculum, instruction, and programmatic support, including support for low-achieving students and acceleration for highly motivated students.			Bradford Findell	Magnolia (1 st floor)		
3-5	Computational Fluency with Multi-digit Addition and Subtraction: What Lies Beneath? Computational fluency remains a defining goal in school mathematics. Strong mental strategies are an important basis for achieving the goals for formal computation within the Common Core State Standards for Mathematics. In this session we will examine three elements, as described in <i>Developing Number Knowledge</i> , Wright et al., that represent critical foundational knowledge in this development. We will take a focused look at instructional design across the domains of <i>structuring numbers 1 to 20</i> , <i>conceptual place value</i> and <i>higher decade addition and subtraction</i> to support the skills and strategies necessary for strong computational fluency.			Petey MacCarty, Kurt Kinsey	Salon A		
P-2	Covering vs. Uncovering Primary Math Content. “I covered that; I don’t know why they didn’t get it.” This is an often heard statement in elementary classrooms when the students don’t seem to remember the mathematics we know we “taught” them. What is the difference in covering content and uncovering mathematical understanding? How will uncovering student understanding help them to truly learn the mathematical concepts we teach? How can it be done in such a way as to still “get everything in” and still afford teachers a life outside of the classroom? This session will use the mathematical practice standards to offer some strategies, activities, and processes for addressing this ongoing battle.			Katrina Slone	Salon B		
6-8	PIMSER - Functions Come to the Middle School. “Functions provide a means for describing and understanding relationships between variables. They can have multiple representations - in algebraic symbols, situations, graphs, verbal descriptions, tables, and they can be classified into different families with similar patterns of change.” (<i>Developing Essential Understandings of Expressions, Equations, and Functions, Grades 6 - 8</i> , National Council of Teachers of Mathematics, page 9.) Join us in this session and experience a multi-faceted approach to teaching algebraic content so that students of all learning styles are engaged in mastering the big ideas and essential understandings about functions as they transition from number sense to algebraic thinking. We will discuss the latest research and apply it to curricular, instructional, and assessment strategies through the use of technology, manipulatives, and multiple representations. We will incorporate the Standards for Mathematical Practice as a way of enhancing student mastery of the essential understandings of functions.			Gloria Beswick, Terry Parkey	Salon D		
P-5	Core Instruction - Foundational Practices in Elementary Math. In this session Linda Black and Renee Turner, instructional coaches in Boone County, will lead you through the importance of foundational concepts, such as number sense, spatial sense, and fluency on the number line as keys to developing math smart students in elementary school. The ‘action research’ behind their presentation will include hard data as well as practical applications for the classroom and for interventions for RtI. Join us for a real world look at solid math instruction for elementary students.			Linda Black, Renee Turner	Bluegrass		



2012 KCM Conference Session Details

Session 4A

Thursday 1:30 pm – 2:00 pm • 30 Minute Sessions

Session 4A					Thursday 1:30 pm – 2:00 pm				
30 Minute Sessions	Grade Levels	Session Topic			Presenters	Location			
	P-5	Using Microsoft Excel to Manage Student Data. Participants will explore some Microsoft Excel functions that can be used to manage existing student data (SNAP, AVMR, MR, Rtl, universal screeners, etc). With the right spreadsheet, sorting to create groups and finding intervention priorities can be a snap! Templates and instructions will be available. This session will provide an introduction to several processes in Excel; count if, conditional formatting, sorting, creating graphs, and more. Participants are encouraged to bring their own examples and ideas, along with a computer and student data if available.			Bethany Neel	Salon C			
	P-5	Access to Algebra: Helping K-5 Students Develop Relational Thinking. This interactive session will discuss the importance of Relational Thinking (Carpenter, Franke, & Levi, 2003) and provide teachers with strategies to help K-5 students develop algebraic/relational thinking. Teachers will also learn how to assess students' understanding of equality to better inform their instruction. Part of the session will also connect to strategies for helping students become more computationally fluent. I will use Susan Jo Russell's (2000) description of computational fluency consisting of accuracy, efficiency, and flexibility. With algebraic/relational thinking as the focus, emphasis will be placed on flexibility of thought. The overall goals of this session are: 1) to help (pre-service and in-service) teachers gain strategies that will help elementary school students understand the idea of equality and begin to think relationally; and 2) to understand the extent to which students are able to think in algebraic/relational terms (via assessment techniques) and realize the importance of teaching this foundational skill.			Cindy Jong	Triple Crown			
	9-16	Your Students Can Be "Mathletes": Facilitating Student Perseverance in Difficult Mathematical Thinking. People in athletic programs are intimately familiar with the idea of persevering when it comes to facing challenges. An important part of their process is finding the strength within to rise to challenges and to push through when things get tough. One of the biggest factors that contributes to athletes developing and "sticking it out" is a support structure that includes coaches that understand motivation and trainers that know ways to help athletes get past barriers. The challenge of learning to think mathematically can be much like an endurance race. We recommend that "athletic trainer" thinking can work in the classroom or a tutoring lab setting. Much can be learned from athletic trainers and coaches to help students learn to find the perseverance to push through their difficulties in math. This thinking can hold true regardless of the age level. You can learn to be a "Matheletic trainer!" Participants will come away from the session with a toolkit for thinking about helping students get through difficult problems. They will have some strategies that can be used to help build motivation in students.			Bill Phelps, Amanda Maggard	Blackberry Lilly			



2012 KCM Conference Session Details
Session 4B
Thursday 2:10 pm – 2:40 pm • 30 Minute Sessions

Session 4B		Thursday 2:10 pm – 2:40 pm		
30 Minute Sessions	Grade Levels	Session Topic	Presenters	Location
	P-5	How Do I Know I am Teaching All of the Standards? This session is for teachers K-5 who are interested in learning about activities to teach the new Common Core State Standards and ways to organize the activities.	Tonda Thompson	Salon C
	3-5	New Dreambox Learning for Intermediate Grades. The long-awaited Dreambox platform for intermediate grades is finally here! The new platform includes: over 100 new lessons with a strong emphasis on fractions, new virtual manipulatives, and alignment with the 3rd and 4th grade Common Core State Standards. This platform still includes the great Dreambox features from primary grades version such as proficiency reports and personalization of lessons.	Suzanne Farmer	Triple Crown
	9-16	The Effects of a Non-Traditional Approach to Teaching Introductory Statistics. Traditional classroom instruction consists of teacher-centered learning in which the instructor presents course material through lectures. A recent trend in higher education is the implementation of student-centered learning in which students take a more active role in the learning process. The purpose of this study was to determine if a non-lecture approach to an introductory statistics course affects students' attitudes towards statistics, perceptions of statistics, and perceptions of their knowledge of statistics. Two sections of introductory statistics were taught using two different methods of instruction: one was a traditional teacher-centered lecture approach, and the other was a nontraditional student-centered non-lecture approach. Preliminary findings from collected data will be presented. Although these courses were taught at the collegiate level, we believe that this would be applicable to high-school statistics courses as well. Additionally, we will share how teaching statistics using a non-lecture format addresses several of the Standards for Mathematical Practice.	Melanie Autin	Blackberry Lilly



2012 KCM Conference Session Details
Session 5
Thursday 2:50 pm – 4:00 pm • 70 Minute Sessions

Session 5				Thursday 2:50 pm – 4:00 pm			
Grade Levels	Session Topic			Presenters	Location		
3-5	Connecting the Teaching and Learning of Fractions. Students' ideas about the meaning of fractions are quite varied. In Grade 3, students are expected to develop the idea of a fraction more formally than the everyday use of fraction terms. In particular, they are expected to build on the idea of partitioning a whole into equal parts. This presentation looks at how students' understanding of fractions can be built up using linear models and connecting fraction notation to the process of sharing.			Peter Gould	Magnolia (1st floor)		
P-2	Exploring Numeracy Throughout the Day. Having a strong sense of number is critical to future math success. The Common Core State Standards in Mathematics have placed a greater emphasis on number in the early grades. In this session, participants will see ideas on how to incorporate numeracy explorations throughout the day during calendar, centers, transitions, seatwork time, game time, and intervention. The goal is for students to explore number in a variety of ways without impacting a lot of teaching time. Throughout the year, students explore a variety of numeracy concepts and skills such as: subitizing up to 5, combinations of 5, anchoring to 5, doubles, combinations of 10, anchoring to 10, and combining and partitioning numbers to 20, as well as exploring quantities and representations of numbers up to 100 and beyond. Participants will be able to see student work in an interactive workshop setting. These activities have helped my students during problem solving. As students participate in the various explorations, they move away from using count-by-one strategies and manipulatives and progress to using more sophisticated non-count-by-one strategies. The end-of-the-year assessment results will be presented and recommendations for the future discussed.			Cindy Pray	Salon A		
6-8	Middle School Mathematics Intervention Activities for Developing Numeracy. The goal of this session is to give middle school mathematics teachers activities that can be used in whole class or small group settings that will increase students' fluency with whole numbers and fractions. These are activities that can be used as class openers, during time that is targeted for intervention, or during a regular class period.			Linda West, Kim Elam	Salon B		
6-12	PIMSER - Improving Mathematical Practices in a MathNspired Classroom. In this session participants will have hands-on experience using TI-Nspire as a tool for teaching and learning middle grades and high school mathematics. We will focus on activities and strategies for increasing student engagement and improving mathematical practices. In addition, participants will learn about the free classroom resources and professional development opportunities available through education.ti.com .			Ruth Casey, Gloria Beswick	Salon D		
9-16	Accessing the Mathematics Behind Calculator-Generated Linear Regression Lines. The new Common Core State Standards for Mathematics for high school includes standards in statistics and probability. In the domain "Interpreting Categorical and Quantitative Data," one of the standards is "Summarize, represent, and interpret data on two categorical and quantitative variables." The cluster for this standard includes "Fit a function to the data," with an emphasis on linear models. Opportunities that students have to create lines of best fit usually include sketching lines and using graphing technology. Do students who understand linear functions need to wait until calculus to look more deeply into the mathematics behind the calculation of the least squares regression line? We think not! In this session, participants will be challenged to reason about ways to use the coordinates of data points to calculate values for the slope and y-intercept of the line of best fit. They will consider a sequence of tasks designed to highlight the underlying idea of averages using calculators and a java applet from NCTM's Illuminations website.			Laura Bristol, Bethany Noblitt	Bluegrass		
K-9	K-9 Transition Program. The K-9 Transition Program is designed to help ensure that all students develop number sense and fluency by acquiring the automaticity skills necessary to be successful in higher-level mathematics. Without automaticity, students lose estimation, number sense, and their algorithmic facility. During this session, attendees will be introduced to and given an overview of the K-9 Transition Program and the protocols involved in the program from a teacher involved in the program since its inception and from the Eastern Kentucky University professor who designed the program. The K-9 Transition Program began as a joint effort between ECU and the Corbin Independent School System and is now being used by school systems all over the state. For students, it is a self-paced program designed to ensure that students, K-9, learn all their number facts. Attendees will get to see the program in action through pictures, will learn of the protocols involved, and will also receive sample "fact sheets" specially designed for this program. Also, included in this session would be ways to involve the Arts & Humanities Program Review.			Jennifer Phipps, Robert Thomas	Triple Crown		

2012 KCM Conference Session Details
Session 5A
Thursday 2:50 pm – 3:20 pm • 30 Minute Sessions

Session 5A		Thursday 2:50 pm – 3:20 pm		
30 Minute Session	Grade Levels	Session Topic	Presenters	Location
	6-8	Creating Assessments Aligned with The Common Core State Standards. With the implementation of the new Common Core State Standards through KCAS in Kentucky, teachers are asked to meet many transition challenges. One of these challenges is developing rigorous assessments for new standards. The work of PARCC and the SMARTER Balanced Assessment Consortium are in the works but provide little support to teachers in the current transition year. To address this gap in Fayette County, the middle school math coaches are teaming up to develop assessment item banks for the district teachers to use in building their assessments. The process has been informative for the coaches and teachers, and has helped jumpstart collegial planning discussions and deconstruction of standards at the school level. The presenter will share the structure of the project, the design of the items, and the distribution method. Examples of unit tests developed by teachers will also be presented.	Craig Schroeder	Salon C

2012 KCM Conference Session Details
Session 5B
Thursday 3:30 pm – 4:00 pm • 30 Minute Sessions

Session 5B		Thursday 3:30 pm – 4:00 pm		
30 Minute Session	Grade Levels	Session Topic	Presenters	Location
	P-16	Pursuing a Graduate Degree in STEM Education: The Facts and Myths. Do you have KTIP course credits and do not know how to utilize them? Are you interested in pursuing a graduate degree in STEM Education? The University of Kentucky offers masters and doctoral degrees in STEM Education as well as Rank I certification programs. This presentation will explore the facts and myths about obtaining an advanced degree in STEM Education. STEM Education faculty from the University of Kentucky will offer information, feedback, and advice for educators and administrators who are considering an advanced degree in STEM Education. Students in our STEM Education programs are still able to specialize in the field of Mathematics Education while learning about Science, Technology, and Engineering Education as well. We offer courses such as Curriculum and Instruction in STEM Education that is an introductory exploration in the research in STEM Education fields, courses that focus on the pedagogical and research aspects of STEM Education such as the "See Blue" Math Clinic course, a project-based instruction course, and an advanced methodology course in elementary mathematics education.	Molly Fisher, Christa Jackson, Cindy Jong, Margaret Mohr-Schroeder, Jennifer Wilhelm	Salon C



Acronyms You May Hear at the Conference



RtI = Response to Intervention

SMP = Standards for Mathematical Practice

CCSS = Common Core State Standards

KCAS = Kentucky Core Academic Standards

CCSSM = Common Core State Standards for Mathematics

While the acronyms above are the standard, there are other versions that you might read or hear, such as: CCS: Common Core Standards or KCCS: Kentucky Common Core Standards.



2012 KCM Conference Session Details
Session 6
Friday 8:30 am – 9:40 am • 70 Minute Session

Session 6		Friday 8:30 am – 9:40 am	
Grade Levels	Session Topic	Presenters	Location
3-5	Using Assessment to Support Effective RtI Systems. Assessment is central to RtI. It is impossible to have a high quality RtI system without a good plan for assessment. This presentation will focus on the different forms of assessment and the different roles that they play. A case will be made for ensuring that the assessments that you choose align with your pedagogical philosophy. We will also consider planning for a purposeful balance of assessment types to enhance and not detract from the quality of the program.	David Woodward	Magnolia (1st floor)
9-16	An Introduction to Randomization Tests: Using Simulations to Determine Significance. In the newly adopted Common Core State Standards, traditional statistical inference has been replaced with simulation-based inferences. In making inferences from experimental data, students are now expected to compare treatments through simulation, namely with the use of randomization tests. In traditional inference, a test statistic is calculated which should follow a known distribution if the null hypothesis is true (under certain conditions). If a randomization approach is taken, some statistic of interest is selected and many randomizations are simulated assuming the null hypothesis is true. Randomization tests have gained in popularity due to the fact that very little background is required to conduct the test. Generally, students simply need some understanding of basic descriptive statistics. Additionally, randomization tests are argued to be more intuitive in nature because they emphasize conceptual understanding. While the tests rely heavily on computer simulations, there are now software packages capable of conducting the tests with ease. In this presentation, an introduction to randomization tests will be given with examples, followed by a discussion of advantages and potential pitfalls.	Brooke Buckley	Salon A
6-8	Using Virtual Manipulatives to Solve Equations. How do eighth grade students use virtual manipulatives to solve equations? From a qualitative research project, I will show how students relate the representations created by virtual manipulatives to solve algebraic equations. According to the Common Core State Standards, it is important for students to explain steps to solving equations and justify their solution method. Using virtual manipulatives increases student understanding. I will also share student beliefs and attitudes related to virtual manipulatives. Additionally, I will demonstrate virtual manipulatives for solving equations and other prealgebra and algebra topics.	Robin Magruder	Salon B
9-12	Modeling with Mathematics in High School: Some of the Many Ways to Make it Happen. What is the extent to which students are to apply the practice of modeling in mathematics? Are traditional word problems and applications enough to fully develop this proficiency, or must we investigate alternatives? During this session, participants will be exposed to a variety of problems, projects and other alternatives that will challenge students to make sense of real-world phenomena, "mathematize" those phenomena and then evaluate the quality of the model they created. Be prepared to engage in such mathematical thinking yourself if you choose to attend!	Seth Hunter	Salon C
P-2	Making Math Magic - Developing Understanding of Addition and Subtraction; the Standard for Mathematical Practice #1: Make Sense of Problems and Persevere in Solving Them. Problem solving in grades K-2 can be a difficult expectation when students are not given ample opportunities to bridge their understanding of the ideas, words, and symbols related to addition and subtraction. This session focuses on helping young students transition from concrete representations of contextual problems to symbolic "story telling." A variety of models and organizers (story mats, charts, etc.) are shared to provide students with strategies for developmentally appropriate representations of "What do you know?" and "What do you need to know?" as they begin their problem solving experiences with understanding and success.	Rhonda Allen Burns, Anne Booth, Tami Pickett, Vonda Stamm	Salon D



2012 KCM Conference Session Details
Session 6
Friday 8:30 am – 9:40 am • 70 Minute Session

Session 6		Friday 8:30 am – 9:40 am	
Grade Levels	Session Topic	Presenters	Location
9-16	Patterns and Problem Solving - Recurring Themes Throughout the Curriculum. Mathematics can be succinctly described as the science of patterns. The Common Core State Standards for Mathematics and the Standards for Mathematical Practice embrace Standards 1 and 7 throughout the K-12 curriculum (and beyond) which respectively entail making sense of problems and persevering in solving them and looking for and making use of structure. This session will focus on engaging the participants with a plethora of dynamic problems that encompass these and additional standards such as reasoning abstractly and quantitatively, constructing viable arguments, modeling with mathematics and using appropriate tools such as technology as manifested in the form of graphing calculators and beyond in a strategic fashion. Problems will be selected from various fields of the mathematical landscape including algebra, geometry, precalculus, calculus, discrete mathematics and number sense. This session while dealing with problems amenable to secondary and collegiate mathematics can nonetheless be useful for a general audience seeking to view mathematics from a new and hopefully satisfying perspective with the ultimate outcomes that mathematics can be both engaging and fun.	Jay Schiffman	Bluegrass
P-12	CIITS: Implementing the Kentucky Core Academic Standards Using Highly Effective Mathematics Teaching and Learning Through Technology. Implementing the Kentucky Core Academic Standards (KCAS) is challenging and ongoing. Teachers need materials to support implementation. This session focuses on instructional improvement and how to access standards, materials and tools through Kentucky's Continuous Instructional Improvement Technology System (CIITS). So, come learn how you can use CIITS in your classroom to support KCAS implementation, locate highly engaging instructional resources aligned to KCAS, plan lessons, differentiate instruction and use the formative assessment process on a regular basis. Joining us will be Kim Zollo from Schoolnet.	Robin Hill, Tim Sears, Kim Zollo	Triple Crown



2012 KCM Conference Session Details
Session 7
Friday 10:00 am – 11:10 am • 70 Minute Sessions

Session 7		Friday 10:00 am – 11:10 am	
Grade Level	Session Topic	Presenters	Location
P-12	Teacher Education in the Era of the Common Core: Engaging in Mathematical Practices as a Teacher and Learner. Teaching in the era of the Common Core State Standards presses teachers to consider ways to reorganize and streamline the teaching of many aspects of mathematics content, particularly in the secondary grades. In addition, the Standards for Mathematical Practice (SMP) are intended to embody the important "processes and proficiencies" across all levels of mathematical education. The SMP in many cases represent a significant departure from business as usual in the math classroom. In this session, we will look at the SMP from the standpoint of both content and pedagogy, explore series of tasks designed to engage teachers in work on the SMP, and consider the implications for the design of professional education experiences that support learning about the SMP and promote meaningful shifts in classroom practice.	Mike Steele	Magnolia (1 st floor)
P-5	Adapting Small Group Activities to a Whole Group Setting. Many math intervention activities are designed to be used in a small-group environment. The challenge for a traditional classroom teacher is learning to adapt these activities to maximize student learning while minimizing the potential classroom management difficulties. The presenter will share how a few simple modifications can create engaging whole class learning opportunities.	Meredith Brewer, Jennifer Martin Viki Baker Julie Kirsch Rachel Stinson Kris Jarboe	Salon A
3-4	Making Math Magic - Learning Fractions in Grades Three and Four through the Standards for Mathematical Practice. 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. Specific questioning techniques and Informal formative assessments are included in the session to check for students' understanding of foundational fraction concepts.	Vonda Stamm, Rhonda Allen, Ann Booth, Tami Pickett	Salon D
P-5	Pacing Yourself with the New Standards. Are you overwhelmed by the new math standards? We've got a plan to share! See how we've developed pacing guides, common assessments, workshop instruction, report cards, and resources to support mastery of the K-5 standards. In this session we will describe the process we used to develop materials as well as share electronic materials.	Helen Blevins, Becky Fuqua, Wendy Manual, Betty Jo Davis, Suzanne Farmer, Andrea Hall	Triple Crown



2012 KCM Conference Session Details
Session 7A
Friday 10:00 am – 10:30 am • 30 Minute Sessions

Session 7A		Friday 10:00 am – 10:30 am		
30 Minute Sessions	Grade Level	Session Topic	Presenters	Location
	3-8	Games in the Middle School: Things to Consider. Many people play games for fun and as something to do during their leisure time. But, games also can be educational and used as a learning tool in the mathematics classroom. Games have the potential to develop mathematical concepts, improve perceptual abilities, and encourage problem solving skills. A variety of games exist that can be used to engage middle school students in the learning of mathematics, but what should teachers consider when selecting a game to be used for instructional purposes? In this session, participants will engage in playing a variety of games and discuss their criteria for selecting games to play in the middle school mathematics classroom. Additional points to consider when selecting games for classroom instruction will also be shared.	Christa Jackson	Salon B
	P-5	Move It! Students enjoy playing Move It! There is a bit of competition involved, but at the same time the game reinforces skills and concepts. Numeracy is easily reinforced at varied levels along the continuum. The game is adaptable to any concept being taught. Johnsie and I will present many of the variations that we have made for Move It! They include recognizing finger patterns, how many more to make 5, one more/one less, 5+ making 10, doubles, place value, adding two-digit numbers, multiplication and division. We will discuss the rules of the game and attendees will have the opportunity to play some of the variations of the game. Complete packets of the game will be emailed to participants.	Stephanie Horn, Johnsie Tucker	Salon C
	P-2	RTI - Reaching The Individual. Response to Intervention is on many educators minds along with the new standards. RTI - Reaching The Individuals is a way to document and graph your students' progress based on the new math standards and "I Can" statements. An explanation, examples of the assessments, as well as some activities will be shared. You will leave this session with a new system to document students' growth and meet their individual needs.	Selisa Adams, Jo-Lin Owens, Calvin Music	Bluegrass
	P-2	Using Reading to Teach Math: Can it Work? There are many ways to help students learn so why not use fun books that also teach math? We are going to look at books that help teach math concepts for kindergarten through 3rd grade. While teaching math you can work on reading as well!	Amanda Terry, Melissa Dicken	Crimson Clover



2012 KCM Conference Session Details
Session 7B
Friday 10:40 am – 11:10 am • 30 Minute Sessions

Session 7B		Friday 10:40 am – 11:10 am		
30 Minute Sessions	Grade Levels	Session Topic	Presenters	Location
	6-12	Students Using Assessments to Focus Their Learning. Pre-assessments, formative assessment - ways to help students self-assess and monitor their own learning. A planning tool and teaching strategies will be presented to help teachers think about ways they and their students can utilize data from pre-assessments, help students monitor their own learning throughout a unit of study, and define which targets they must focus on for mastery based on self and peer assessments. Tools and strategies shared will help teachers make the shift to a true formative assessment learning environment.	Pam Wilson	Salon B
	P-2	How to Handle Those Rebellious Teens. Rebellious teens getting you and your students stressed because they refuse to follow the rules, not to mention those troublesome "tweeners," eleven and twelve? Teen numeral identification causes trouble for many young students because they don't follow the same pattern as other two-digit numbers. Get some ideas that you can use right away to "tame those teens."	Belle Rush, Jan Estes, Martha Riley	Salon C
	P-2	Place Value - Why is it so Puzzling? Place value concepts are complex and difficult for many students to understand. Children memorize procedural rules and steps for solving addition and subtraction problems, but do not have the foundational skills in place value to determine for themselves when to borrow and if they are getting reasonable answers when solving problems. Using hands on activities from Kathy Richardson, participants will learn to address misconceptions regarding concepts such as regrouping, comparing quantities of numbers to one hundred, tens and ones, and addition and subtraction of two-digit numbers.	Julie Tatman, Linda Montgomery	Bluegrass



2012 KCM Conference Session Details
Session 8
Friday 11:20 am – 12:30 pm • 70 Minute Sessions

Session 8		Friday 11:20 am – 12:30 pm	
Grade Level	Session Topic	Presenters	Location
8-12	Reasoning and Making Sense for Algebra. The Standards for Mathematical Practice can be used as a foundation to help educators bring some desperately needed mathematical coherence to school algebra. This talk will look at how a small set of general-purpose habits, like abstracting regularity from repeated calculation, can help students see algebra as a web of interconnected results and methods that makes sense. Seeing algebra in this way makes it more understandable, useful, and enjoyable for students. It makes teaching algebra more satisfying and effective for teachers. And, it connects school algebra to algebra as it is practiced outside of school, both as a scientific discipline and as a central tool in every modern field of scientific inquiry. We'll work through some low-threshold, high-ceiling examples that show how seemingly different topics in high school mathematics can be understood more effectively when they are viewed through the lens of mathematical practice.	Al Cuoco	Magnolia (1 st floor)
P-5	Let's Go on a Fluency Hunt! "We can't go over it... can't go under it... we have to go THROUGH it!" The term "fluency" is a hot topic due to the Common Core State Standards. What does this mean? How do we help students reach fluency in addition and subtraction? In this presentation, we will share a hands-on activity we used with teachers in our school district to help them see pathways to fluency, and to bring into focus the importance of emphasizing the language in the new standards. Participants will have access to the PowerPoint we use, as well as other documents we share. You will be inspired to lead your own teachers in a "fluency hunt"!	Becky Reister	Salon A
3-8	Developing Multiplication and Division Operations for Whole Numbers, Decimals and Fractions through Conceptual Understanding. How are the operations of multiplication & division for whole numbers, decimals and fractions related? How can using real world situations and multiple representations help students to make meaning and conceptually understand these operations? In this session we will work from basic facts, to multi-digit whole numbers & decimals and on to fractions by exploring situations and problems using multiplication & division. We'll focus on activities & tasks that enable students to construct viable arguments, use reasoning, and modeling, to develop their own meaning and may also help you to think differently about how your students learn.	Debbie Waggoner	Salon B
K-2	Singapore Math and Standards for Mathematical Practice. The Standard for Mathematical Practice #4, defines one aspect of student proficiency as an ability to "model with mathematics." Singapore math strategies include having students draw number bonds or bar models when thinking about and/or communicating about various arithmetic situations. Participants will learn to negotiate the development of students' increasingly sophisticated reasoning through the internalization of quantitative concepts and through the building of foundational fluency, specifically adding and subtracting to 20 and to 100. Participants will receive differentiated activity masters with scaffolded Singapore math strategies for advancing students' arithmetic strategies and skills, in alignment with the Common Core State Standards for Mathematics Progressions.	Brenda Lucas	Salon C
6-12	Making Math Magic - Transformations in Geometry: Using the Standard for Mathematical Practice #7: Look for and Make Use of Structure. In the Common Core State Standards, transformations become a foundational element in high school geometry. This session will look at the structure and patterns that support that view.	Ann Booth, Tami Pickett	Salon D
P-5	Getting Students on the Road to Fluency with Number and Operations. What does it mean to add and subtract using strategies based on place value understanding? Instructional ideas and tools will be shared for developing strategies that will help students add and subtract with understanding and accuracy.	Linda Jewell	Bluegrass
6-8	Making Sense of Middle School Statistics Standards. The rigor of the Common Core State Standards has placed more sophisticated statistics concepts into middle school classrooms. In this session, participants will learn the relationship among the concepts in the statistics standards, with particular focus on the concepts that are new to the grade level (e.g., mean deviation). Also, participants will learn how the high school curriculum will extend and apply this knowledge. Participants will receive and utilize print materials suitable for use in teaching these concepts in a middle school classroom.	Brian Durham	Triple Crown



2012 KCM Conference Session Details
Session 9
Friday 1:30 pm – 2:40 pm • 70 Minute Sessions

Session 9		Friday 1:30 pm – 2:40 pm	
Grade Levels	Session Topic	Presenters	Location
9-16	Pythagorean Triples and the Unit Circle. One of the units of study proposed in the Appendix to the Common Core State Standards for Mathematics document is titled Polynomial, Rational, and Radical Relationships. In this unit, Standard A.APR.4 is addressed. Standard A.APR.4 states “Prove polynomial identities and use them to describe numerical relationships.” The example that is given in the statement of the standard is the polynomial identity that is used to generate Pythagorean triples. The instructional notes allude to a mathematical connection between the polynomial identity used to generate Pythagorean triples and the solutions to a system consisting of the unit circle and a line with y-intercept equal to its slope. In this session, we will explore the mathematics of this particular standard and its connections to the solutions of the mentioned system as well as other standards that will aid in deeper mathematical understanding.	Bethany Noblitt	Magnolia (1 st floor)
6-12	Using the 5E Lesson Model to Implement the Standards for Mathematical Practice. With the Common Core State Standards, teachers are expected to create lessons that engage their students in the process of becoming mathematicians while they learn mathematics. If all mathematics teachers work to implement one or more of the Standards for Mathematical Practice throughout their lessons, students can grow over time to become great mathematical problem solvers. This has far-reaching consequences in that these same students can apply this problem solving ability to the world around them. During this presentation, we will show how using the 5E Model (Engage, Explore, Explain, Elaborate and Evaluate) to develop student-centered lessons can require students to implement the Standards for Mathematical Practice. Participants will be actively engaged in learning what the 5E Model is and how to implement these lessons in both middle grades and secondary mathematics classes. This session will allow educators to leave with a deeper understanding of how to create a 5E lesson and provide them with different ideas for incorporating mathematics content into 5E lessons in their own classrooms in an effort to promote the Standards for Mathematical Practice.	Kari Everett, Dagan Dalton, Emily Evanko, Kayla Fawbush, Tyler Ghee, Tara Thompson, Sara Johnson	Salon A
P-8	Why Ask? Participants will reflect on their current use of questioning strategies in their classrooms, learn some questioning strategies that will push students forward in their thinking, and practice a strategy for developing good questions. Resources used during the presentation are: <i>My Kids Can</i> , edited by Judy Storeygard; <i>Good Questions for Math Teaching K-6</i> , by Peter Sullivan and Pat Lilburn; <i>Good Questions for Math Teaching 5-8</i> , by Lainie Schuster and Nancy Canavan Anderson; and <i>Formative Assessment in Action, Weaving the Elements Together</i> , by Shirley Clarke.	Gwen Morgan	Salon B
P-5	Real World Problem Solving in Operations and Algebraic Thinking. Operations and algebraic thinking are key elements in the progression of a student's journey in making sense of the real world. In this session, participants will learn about different problem situations from the Kentucky Core Academic Standards for Mathematics. Participants will also explore the relevance of the Measurement and Data domain in supporting student understanding of the problem situations. Participants will walk away with multiple examples of problem situations to use in their classrooms.	Tim Sears, Seth Hunter	Salon C
5-6	Making Math Magic - Learning Fractions in Grades Five and Six through the Standards for Mathematical Practice. This session is an extension of Learning Fractions in Grades Three and Four through the Standards for Mathematical Practice, with an emphasis on developing conceptual understanding of computation with fractions. Too often, students are taught a rule for manipulating a fraction without first putting the problem in context and experiencing a visual image of what happens during that process. Unfortunately, they forget the rules and are confused when the ideas for whole number operations do not always transfer to operations 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.	Vonda Stamm, Rhonda Allen, Ann Booth, Tami Pickett	Salon D



2012 KCM Conference Session Details
Session 9
Friday 1:30 pm – 2:40 pm • 70 Minute Sessions

Session 9		Friday 1:30 pm – 2:40 pm	
Grade Levels	Session Topic	Presenters	Location
3-12	How Kentucky Student Score Reports Inform Mathematical Instruction. The Quantile measure is reported for all students who take the Kentucky mathematics accountability tests in grades 3 through 8 and grade 11. This session will offer mathematics educators insight into how the assessment results offer actionable instructional strategies that target student needs. Participants will learn about the tools and resources of the Quantile website (www.quantiles.com) that help teachers use these measures to differentiate instruction, offer aid to families, and inform instruction as it relates to the Kentucky Core Academic Standards and mathematics textbooks. All resources on the Quantile website are free to educators, families, and students. Handouts and resources will be distributed.	Bethany Hudnutt	Bluegrass
P-5	Centered Mathematics. Teachers need time to work through and experience activities to truly understand the purpose and potential they might have. In this session, teachers will take on the role of students and work their way through several math learning centers. The topics and activities will be taken from the series by Kathy Richardson entitled <i>Developing Number Concepts</i> . Blackline masters and connections to the content standards will be provided.	Linda Montgomery, Kris Jarboe	Triple Crown



2012 KCM Conference Session Details
Session 10
Friday 2:50 pm – 4:00 pm • 70 Minute Sessions

Session 10		Friday 2:50 pm – 4:00 pm	
Grade Levels	Session Topic	Presenters	Location
P-12	“Cooking Up” (Student Engagement)^2. This session will present the audience with “research-based” means for taking student engagement to the next level. Some of the main areas for focus will be on the concepts of “surprise and delight”, student agency, and of next generation technology tools aimed at increasing student involvement. All in all, participants will gain greater insight into the power of personalized learning. Participants can “expect the unexpected” in this session while also becoming more purposeful about creating a classroom of connected learners.	Buddy Berry	Salon A
6-12	Making Math Magic - Geometry and the ACT through the Standards for Mathematical Practice. Between coordinate and plane geometry, 53% of the ACT’s math section is geometry. Thus, preparation in this area is critical to student success on the ACT. Kentucky is one of fewer than ten states to use the ACT as part of their accountability and as a result, preparing all students for taking the ACT has become a real challenge in Kentucky. This session will focus on time-saving strategies for taking the ACT.	Tami Pickett, Ann Booth, Rhonda Allen Burns, Vonda Stamm	Salon D
P-8	Bringing in The Math Workshop. The Math Workshop Model is meant to be a flexible way to supplement any mathematics instruction. The model can be flexible enough to meet the needs of students. The Math Workshop can be center based, small group, whole group, or independent time. Participants will see how Lacy Elementary has implemented The Math Workshop Model.	Linda Caudle, Greg Gierhart	Bluegrass



2012 KCM Conference Session Details
Session 10A
Friday 2:50 pm – 3:20 pm • 30 Minute Sessions

Session 10A		Friday 2:50 pm – 3:20 pm		
30 Minute Sessions	Grade Levels	Session Topic	Presenters	Location
	P-5	Math is Special. Yates Elementary was over capacity in grades 2-3 at the beginning of the 2011-2012 school year. A 2/3 split class was added to help class sizes. Once this new classroom was added there were no longer enough special area classes to allow each class to be in a special class each day. At that time our principal came to me and asked if I would be interested in teaching a Math Lab special class to the 2nd and 3rd grade classes. I was very excited and we started this new schedule right away. We have several struggling math students at Yates and this Math Lab allows me to focus on the foundations and fundamentals that the students often lack. In Math Lab we do whole class work, group work and individual work. This class allows me to work with all second and third grade students using hands-on materials. I also often have the students up and out of their seats participating. So far Math Lab has been a huge success. The students stop me in the hallway every day asking when they have Math Lab again. It also exposes the students to more mathematics and allows them to work closer to their own level. I believe that adding this special class will truly benefit individual students as well as the grades as a whole. I would love to present this idea to others.	Diana Oliver	Magnolia (1 st floor)
	P-2	Making Standards Meaningful and Manageable in 2nd Grade. In an effort to close achievement gaps at Mary Todd Elementary, we began looking deeper into the numeracy standards at 2nd grade. Focusing only on standards in Operations & Algebraic Thinking, as well as Numbers and Operations in Base Ten, we are creating a ladder of strategically designed activities that teachers can use to help students “climb” to mastery. Using AVMR assessments, we created a class profile and began to strategically address the missing “rungs” in our students’ numeracy ladders. In this session, we will share our “work in progress”.	Naomi Carroll, Shelley Dickson	Salon B
	9-16	Fourth Year Math Course. This session, presented by a KDE consultant, will address various strategies and requirements for the 4th year math course for seniors. Solutions such as Career/Tech courses and transitional courses will be included in the presentation.	Amy Patterson	Salon C
	P-5	Enriching Math with the Real World. Enrich your math teaching by using pictures you find in the real world! Create journal problems to challenge your students allowing them to make real world connections.	Melissa Dicken, Amanda Terry	Triple Crown



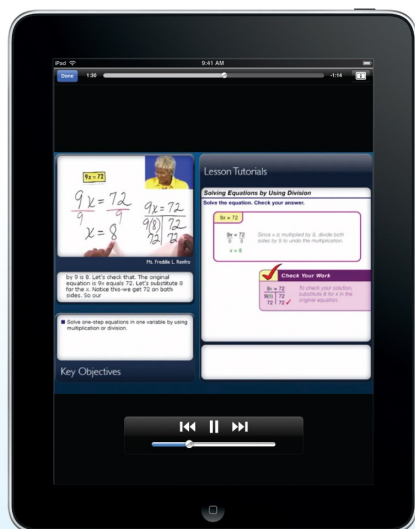
2012 KCM Conference Session Details
Session 10B
Friday 3:30 pm – 4:00 pm • 30 Minute Sessions

Session 10B		Friday 3:30 pm – 4:00 pm		
30 Minute Sessions	Grade Levels	Session Topic	Presenters	Location
	P-5	Classroom Number Talks. Want to improve math scores in your classroom? Try having a conversation about math daily for 5-10 minutes. Participants will learn how to enhance student thinking about math strategies to gain computational fluency, the goal for every student. A Classroom Number Talk is all about learning from peers, solving math problems more than one way, explaining their thinking, or repeating the strategy use by another child for solving a problem, and more. You as the teacher can also formatively assess students understanding of math concepts as they are discussed.	Wilma Rogers	Magnolia (1 st floor)
	P-2	Developing Place Value Concepts. Mental strategies for double digit addition and subtraction go hand-in-hand with developing place value concepts and a rich understanding of quantity and number. The presenters will share strategies for working with students on place value concepts, starting with materials and moving to mental computation and the Empty Number Line. Video clips of students "in action" will be utilized during this presentation.	Carrie Gary, Cynthia Aossey	Salon B
	6-16	Tips for Educators to Help Students Overcome Math Anxiety. Every educator of mathematics has dealt with students suffering from math anxiety. We will discuss the key factors for the anxiety and how I've incorporated methods and tools in my class to decrease or even combat a student's anxiety. In addition we will have a group dialogue of other methods/tools that participants have implemented in their own classroom.	Maranda Miller	Salon C
	P-5	Having Fun with G.A.M.E.S. (Games About Math Educating Students). Come explore games that will help your students develop numeracy. We will share many games that will help students understand regrouping, quantity, and many addition strategies.	Jo-Lin Owens, Selisa Adams	Triple Crown





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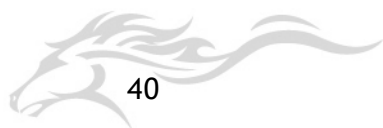
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Martin Riley
Jill Rock
Carolyn Rohde
Catherine Rose
Melissa Rose
Cher Rosser
Chrystal Rowland
Belle Rush
Rachel Scholes
Shelly Scott
Vicki Shelton
Robin Shepherd
Donna Sheridan
Amy Simpson
Jady Skaggs
Jena Smiddy
Kim Smith
Pam Stark
Alicia Stephens
Rebecca Stephens
Tamara Stephens
Beth Stewart
Rachel Stinson
Michael Swihart
Robin Swords
Julie Tatman
Amanda Terry
Beverly Thomas
Tonda Thompson
Johnsie Tucker
Brent Vernon
Jeff Walters
Dawn Wheeler
Oreida Whiles
Ben White
Teresa Wilder
Jenny Williams
Lisa Williams
Olivia Winkle
Beth Wood



