Hands Up, Hands On, Hands Together
KCATM Fall Conference – November 5, 2016

8:00 – 8:30 **Registration and Check In** **Room 115**

Pick up programs
Food (in room 118)

8:30 – 8:45 **Opening Session** **Room 115**

Learn about the conference – last minute changes

8:50 – 9:20 **General Sessions**

Tips for Differentiating Math Instruction **Room 244**

To differentiate math instruction in an inclusive classroom, we need to consider the depth of understanding and the learning phases. Then we need to develop and use good questions to reach those understandings and learning phases. The core of this job is the spectrum of a target learning goal. A step-by-step strategy will be included with the tips. **All Grades – Daesik Lee**

Primary Sessions

Enthusiasm, Engagement, Perseverance **Room 240**

Students will generate binary numbers, recognize and share discovered number patterns, and discover the mathematics behind a Set of "Magic" cards. **Grades K-8 – Alan Gilmore**

Making Number Equations Easy **Room 260**

Come discover and rediscover ways to make number equations simple for primary students. Allow me to share the magical genius of numbers. Learn to use ways to make 10 as a foundational approach to addition fluency. Eliminate counting on fingers and strengthen your students' mental ability to work quickly. **Grades K-5 – Kim Ramsey**

Elementary Sessions

Elementary Mathletics **Room 012**

Team together to compete and prepare for the Annual KCATM Math Contest on March 25, 2017. We will use past exams to Challenge your thinking and the thinking of your students. Samples will be at the 4^{th} and 5^{th} grade levels. **Grades 3-5 – JoAnn Hiatt**

Subitizing for Algebraic Thinking in Upper Elementary **Room 243**

Participants will actively engage in mathematical discourse regarding how subitizing will increase algebraic thinking in all students. **Grades 3-5 – Melynda Hanson**

8:50 – 9:20 Cont.

Making Number Equations Easy **Room 260**

Come discover and rediscover ways to make number equations simple for primary students. Allow me to share the magical genius of numbers. Learn to use ways to make 10 as a foundational approach to addition fluency. Eliminate counting on fingers and strengthen your students' mental ability to work quickly. **Grades K-5 – Kim Ramsey**

Enthusiasm, Engagement, Perseverance **Room 240**

Students will generate binary numbers, recognize and share discovered number patterns, and discover the mathematics behind a Set of "Magic" cards. **Grades K-8 – Alan Gilmore**

Middle School Sessions

Enthusiasm, Engagement, Perseverance **Room 240**

Students will generate binary numbers, recognize and share discovered number patterns, and discover the mathematics behind a Set of "Magic" cards. **Grades K-8 – Alan Gilmore**

High School Sessions

Exploring Trigonometric Functions with Connections to the Unit Circle **Room 011**

Participants will create a graphical representation of sine and cosine functions using hands-on materials in order to understand connections to the unit circle. Bring your protractors and graphing calculators if you can! (Not necessary however.) **Grades 9-12 – Sarah Hicks**

Absolute Value Inequalities **Room 019**

This presentation will allow students to experience a variety of visual representations with graphing to reinforce the definition and concept of absolute value inequalities. **Grades 9-12 – Kelly Lee**

9:30 – 10:25

General Sessions

Managing Technology **Room 033**

Going paperless? Don't panic, because it is manageable. This will be an opportunity to learn how to make use of your technology and still give your students meaningful practice and assessments. Bring your own device and ideas to share. **All Grades – Jan LaFevers**

Culturally Responsive Pedagogy in Math Class with English Language Learners. Math is Fun. **Room 260**

This session will show you how to build relationships with English Language Learners and their parents using Culturally Responsive Pedagogy in teaching math to students in grades 3-5. Effective strategies to meet the needs of culturally and linguistically diverse learners will be shared with participants. **Grades 3-5 – HeeGyoung Song**

9:30 – 10:25
Cont.

Primary Sessions

"Subitize Me" (Rekenreks, Dot Images, Number Sense) **Room 010**

In this session, participants will discover fun ways to teach students how to subitize – or "see" – a small amount of objects and **know** how many there are without counting. Several strategies will be shared such as Rekenreks and Dot Images to increase students' number sense! **Grades PK-2 – Monica Camacho & Karen Brunk**

Dots, Dots, and More Dots **Room 011**

We will explore different number bases and how this relates to students' understanding of place value by something as simple as drawing dots. Whether you teach elementary or secondary, you can use this idea to help students understand operations with whole numbers, decimals, and polynomials. Materials adapted from James Tanton's Exploding Dots. **Grades PK-12 – Cathy Battles**

Elementary Sessions

Dots, Dots, and More Dots **Room 011**

We will explore different number bases and how this relates to students' understanding of place value by something as simple as drawing dots. Whether you teach elementary or secondary, you can use this idea to help students understand operations with whole numbers, decimals, and polynomials. Materials adapted from James Tanton's Exploding Dots. **Grades PK-12 – Cathy Battles**

Understand Fractions through a Guided Sequence of Manipulatives **Room 019**

Are your students struggling with fractions? Build their confidence and knowledge of the topic by incorporating manipulatives into your lessons. This session will focus on how to use various manipulatives to promote conceptual understanding of comparing fractions and fraction equivalence. **Grades 3-5 – Samantha Brant and Cheri Bonsignore**

Middle School Sessions

Dots, Dots, and More Dots **Room 011**

We will explore different number bases and how this relates to students' understanding of place value by something as simple as drawing dots. Whether you teach elementary or secondary, you can use this idea to help students understand operations with whole numbers, decimals, and polynomials. Materials adapted from James Tanton's Exploding Dots. **Grades PK-12 – Cathy Battles**

Ratios and Proportions **Room 012**

Connect fractions, percents, and algebra concepts to experiencing ratios and proportions using hands up and hands on activities. **Grades 6-8 – JoAnn Hiatt**

Puzzles and Brain Teasers for Fun (and Education) **Room 243**

Do you Sudoku? Have you tried KenKen, Bridges, or Futoshiki? Puzzles and brain teasers are a great way to engage students, encourage critical thinking, and build teamwork and collaboration. The Internet has a wealth of famous and not-so-well-known puzzles and brain teasers that are available for FREE. Come to find a few new fun (and addictive) puzzles to explore with your students (and you may just find that you get hooked on doing them yourself). **Grades 6-12 – Lisa Erickson**

9:30 – 10:25 Cont.

High School Sessions

Dots, Dots, and More Dots **Room 011**

We will explore different number bases and how this relates to students' understanding of place value by something as simple as drawing dots. Whether you teach elementary or secondary, you can use this idea to help students understand operations with whole numbers, decimals, and polynomials. Materials adapted from James Tanton's Exploding Dots. **Grades PK-12 – Cathy Battles**

Puzzles and Brain Teasers for Fun (and Education) **Room 243**

Do you Sudoku? Have you tried KenKen, Bridges, or Futoshiki? Puzzles and brain teasers are a great way to engage students, encourage critical thinking, and build teamwork and collaboration. The Internet has a wealth of famous and not-so-well-known puzzles and brain teasers that are available for FREE. Come to find a few new fun (and addictive) puzzles to explore with your students (and you may just find that you get hooked on doing them yourself). **Grades 6-12 – Lisa Erickson**

STEM Activities for the Algebra Classroom – Linear Modeling **Room 244**

Trying to incorporate STEM activities in your Algebra classroom, but finding it hard to find relevant and inexpensive activities? This workshop will give you a few simple linear activities to take back to your classroom that will engage all your students. **Grades 9-12 – Denise Young**

10:35 – 11:30

General Sessions

Story Problems: Unconscious Bias and "White Privilege" in the Curriculum **Room 261**

Teaching mathematics is not a benigh or "value-less" exercise. In this session we will examine the unconscious bias and "white privilege" that is rampant throughout the curricular materials provided by textbook companies. We will examine examples found in the current curriculum and discuss ways to confront and counter these texts in our teaching. **All grades – Bob Riggs**

Primary Sessions

Teaching Math with Picture Books (PK-3) **Room 240**

When teachers use picture books to support math lessons, students are not only excited to learn math in a different way, but they also come to associate the feel-good joy of reading with math. In this presentation we will explore the three tiers of math picture books, how to use picture books in math instruction, book lists, and fitting math read-alouds into your schedule. **Grades PK-3 – Shannon Hankins and Nick Pettit**

Elementary Sessions

Number Talks – Increasing Student Engagement and Mental Math Strategies **Room 010**

In this session, participants will discover ways to increase student participation and engagement using strategies that encourage deeper thinking and allow the teacher to monitor learning. The focus for this session will be on composing and decomposing numbers using multiple strategies. **Grades 3-5 – Monica Camacho & Karen Brunk**

10:35 – 11:30 Cont.

Emphasizing Decomposition in Whole Number Division **Room 019**

Division by decomposition is an alternative to long division with a greater connection to division as an act of grouping. The presentation explains how to divide using decomposition, shows why it encourages conceptual understanding, and walks participants through a 4^{th} or 5^{th} grade lesson using division by decomposition. **Grades 3-5 – Bill Morgan**

Middle School Sessions

Work Smarter, Not Harder – Differentiated Instruction for All **Room 033**

Ever wonder how to have it all together and have a life? There is a way! Differentiated instructional strategies can maximize student success without taking all your time. Our educational journeys have shifted our mindset on what this truly looks like in the classroom. **Grades 6-8 – Syeda Greenlee and Chandra Spence**

Exploring Linear Equations and Graphs: Fun Online for FREE **Room 243**

From introductory level to advanced, there are a wealth of different ways to explore linear equations and their graphs for FREE online. There is a "Guess Who"-style game where students interact with each other, asking questions to try to guess which graph their partner picked. In another game, students manipulate a graph to control the speed and location of a bus (without getting stopped by the police!). Students can also build "marble slides" using linear equations, and navigate mazes. And much more. Bring a laptop or tablet computer to join in the fun during the presentation. **Grades 6-12 – Lisa Erickson**

High School Sessions

Exploring Linear Equations and Graphs: Fun Online for FREE **Room 243**

From introductory level to advanced, there are a wealth of different ways to explore linear equations and their graphs for FREE online. There is a "Guess Who"-style game where students interact with each other, asking questions to try to guess which graph their partner picked. In another game, students manipulate a graph to control the speed and location of a bus (without getting stopped by the police!). Students can also build "marble slides" using linear equations, and navigate mazes. And much more. Bring a laptop or tablet computer to join in the fun during the presentation. **Grades 6-12 – Lisa Erickson**

Conics – The Ugly Duckling of Algebra 2 **Room 244**

Come see how paper folding and using ropes and chalk/markers can be used to help students make sense of conics. **Grades 9-12 – Denise Young**

Turning Down the Volume," "Coming in the Back Door," and Other Strategies to Increase Students' Engagement And Thinking! **Room 264**

All of us desire to increase student engagement and thinking, but the challenge is finding ways to do it. This session will focus on how to engage students in high level thinking involving important geometry concepts without them realizing it! Examples with technology will be provided. **Grades 9-12 – Patrick Sullivan**

11:40-12:35

Primary Sessions

How Blocks Stack Up **Room 019**

Blocks are the perfect tools for young learners. Far from "just playing," block play addresses learning in ALL subject areas and is a "Hands On – Hands Together" activity. It promotes STEAM learning, socialization, independence, physical competence and critical thinking. Come learn how to defend block learning and have some fun! **Grades PK-3 – Maggie Holley**

Good Manipulatives **Room 243**

The Montessori Method has successfully used manipulatives for a century, but these can be costly and time-consuming to learn. This presentation will talk about good manipulatives, the link between manipulatives and abstract learning, where manipulatives go wrong, and how to create good manipulatives quickly for any content. **Grades PK-3 – Michael Round**

Elementary Sessions

Math on the Move (M^2) **Room 012**

Teachers attending Math on the Move will learn how to add activities to their math instruction that require movement and interaction among classmates. These activities promote student engagement and give the students (and the teacher) a chance to get up and move in the math classroom. **Grades 3-5 – Cynthia Hackney and Susan Bizorik**

How to Create a Learning Culture – and Why You Must! **Room 022**

By engaging in discussions and activities, participants will explore and uncover ways to support student learning by creating a classroom culture where

- Questioning and deep thinking are valued
- Mistakes are seen as useful
- All students contribute and their suggestions are valued, and
- Students learn from shared discussion with their teacher and peers. **Grades 5-8 – Vickie Byrd**

Using Mathematics Games in Intermediate Grades to Develop Number Sense **Room 240**

Participants will be engaged in various mathematics games that help students to develop number sense for whole numbers, fraction, and decimals. A packet of instructions for the games will be provided. Participants will also discuss possible adaptations to make the games more suitable for the needs of their students. **Grades 3-5 – Tiffany Hill and Nancy Smith**

Middle School Sessions

Applying the Basics/Principles of Geometry through Zaghraf (Islamic Art) **Room 011**

Learners will review and apply the rules of construction and polygons to design two pieces of Zaghraf. The presentation will also briefly cover the history of Zaghraf and how it can be used in a geometry class today. **Grades 6-12 – Fazila Patel**

11:40 – 12:35 Cont.

How to Create a Learning Culture – and Why You Must! **Room 022**

By engaging in discussions and activities, participants will explore and uncover ways to support student learning by creating a classroom culture where

- Questioning and deep thinking are valued
- Mistakes are seen as useful
- All students contribute and their suggestions are valued, and
- Students learn from shared discussion with their teacher and peers. **Grades 5-8 – Vickie Byrd**

Engaging Students' Minds and Emotions Leads to Student Engagement – Simple still does it! **Room 260**

This presentation will be based on the van Hiele Model of learning geometry and mathematics in general. How do you deal with student apathy to mathematics learning in your classroom? How can you obtain at least 90% student engagement in your classroom? How can you use manipulatives and technology to engage students' minds and emotions in the classroom? Strategies that will be presented will be more non-traditional and simple, but effective and will challenge your current teaching Practices. **Grades 6-12 – Alex Omorodion**

High School Sessions

Are You a Function? **Room 010**

This activity reinforces the definition of a function. The original question: Are you a function? Using paper folding, the inverse of the function is found. The final component is to evaluate if the inverse is a function. **Grades 9-12 – Sharon Erikson**

Applying the Basics/Principles of Geometry through Zaghraf (Islamic Art) **Room 011**

Learners will review and apply the rules of construction and polygons to design two pieces of Zaghraf. The presentation will also briefly cover the history of Zaghraf and how it can be used in a geometry class today. **Grades 6-12 – Fazila Patel**

Engaging Students' Minds and Emotions Leads to Student Engagement – Simple still does it! **Room 260**

This presentation will be based on the van Hiele Model of learning geometry and mathematics in general. How do you deal with student apathy to mathematics learning in your classroom? How can you obtain at least 90% student engagement in your classroom? How can you use manipulatives and technology to engage students' minds and emotions in the classroom? Strategies that will be presented will be more non-traditional and simple, but effective and will challenge your current teaching Practices. **Grades 6-12 – Alex Omorodion**

12:40 – 1:00 **Closing Session** **Room 115**

Wrap Up
Certificates