

Tuesday, March 12

Session #6: 8:00am-9:00am

'Why Do I Have to Learn This?' Connecting Challenging Math Topics to Sports (3-5, 6-8)

Presented By: Michael Oliver (EVERFI)

Room: Salon AB

Description: Is it a challenge getting your students excited about math? Connect it to sports for free! The NHL and MLB have partnered with EVERFI to help teach math and fight the "summer slide" through the sports of hockey and baseball. Come learn about these free programs, their efficacy, gain access to your account, scholarships, supplemental materials, and more!

Guided Math in the Elementary Classroom (K-2, 3-5)

Presented By: Emily Ellsworth (Wilmore Elementary), Pamela Hambrick, Alisha Hall (Jessamine Early Learning Village)

Room: Salon C

Description: Guided math is the key to success in any mathematical classroom. Have you ever wondered how to implement the mathematical practices daily in your math routine? Have you ever struggled with organizing engaging, differentiated, low-maintenance math centers? If so, this presentation is for you. Recently trained in the the principles of guided math, three instructional coaches from Jessamine County have teamed together to better equip you to foster mathematical mindsets in your classroom. From engaging hooks to rigorous, differentiated math centers, this presentation will provide all of the details needed to fully implement guided math as soon as possible.

Subitize Me! (Pre-K, K-2)

Presented By: Sherri Adler (SingaporeMathSupport.com)

Room: Salon D

Description: The term SUBITIZING, which is the ability to instantly recognize the number of items (or pictures) in a small group without the need to count each one individually, was termed by Piaget and is an important stage of developing strong number-sense. During this session, participants will have the opportunity to learn numerous activities that can be implemented immediately in their classrooms, to help develop strong subitizing skills. The session will be hands on and attendees will leave with a variety of tools to put in their teaching box.

Tackling the Academic Language of Math (All Grade Levels)

Presented By: Mark Helton (Central KY Educational Cooperative)

Room: Salon E

Description: Do your students struggle to learn math vocabulary? Are looking to learn a routine to teach vocabulary so that it 'sticks'? A robust mathematical vocabulary fosters connections between concepts and is a vital contributor to academic success. This session will explore how to use the High Leverage Practice (HLP) of Explicit Instruction to teach math vocabulary. Connections to other HLPs and research that supports English Learners will also be made. The strategies presented can be used across all grades. An outcome for the session is that participants will identify key vocabulary to be taught in an upcoming unit and design a lesson using those words.

Changing Math Anxiety into a Mathematical Mindset (3-5, 6-8, 9-12)

Presented By: Michael Dennis (Eminence Independent Schools), Stephanie Walker (West Middle School)

Room: Salon F

Description: Several variables influence a student's perception of their mathematical ability. At an early age, children begin to develop a mathematical identity. Students believe they are good at math or not and feel powerless to change it. Once a negative perception is created, future experiences with mathematics produce anxiety and a sense of failure. The anxiety is real, and it can only subside in a classroom where all mathematicians are appreciated and encouraged. Reducing fears and anxieties connected to math allows students on all academic levels to reach their true mathematical potential. There



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are specific strategies and structures teachers can use to ensure everyone can be good at math. Join us for a look at the battle teachers are facing with math anxiety, the science behind it, and the moves that can be made in the classroom to encourage a mathematical growth mindset.

Contextualized Mathematics Instruction with the Kentucky Skills U Lesson Bank (6-8, 9-12, Post-Secondary)

Presented By: Pamela Callahan (Morehead State University Adult Education Academy)

Room: Salon HG

Description: The KY Skills U Lesson Bank contains approximately 270 lessons in the categories of Reasoning Through Language Arts and Mathematics with connections to Science, Social Studies, Employability Standards/Career Clusters connections, Money Management/Financial Literacy, and Student Retention and Persistence. Each lesson plan has been rigorously vetted before inclusion in the Bank. The lessons are organized for ease of delivery, including a materials list, key vocabulary, student-friendly objectives, introductory materials, guided practice, and independent practice, assessment of mastery, reflection, and closure/connections. The lessons emphasize collaboration, giving and receiving feedback, addressing workplace policies and procedures, interacting in a professional manner, and self-reflection on learning. The lessons are aligned with College and Career Readiness Standards and are age appropriate for middle and high school classrooms. In the presentation, participants will be walked through navigation of the Lesson Bank and where to find mathematics-specific content, and making the connection with real-world activities for enriching mathematical understanding.

Mathematical Thinking: What Is It and How Do I Develop It? (K-2, 3-5)

Presented By: Lucas Elliott (University of Louisville)

Room: Darby Dab/Calumet

Description: What is mathematical thinking? A definition of this vague yet important construct is developed based on a synthesis of literature and teacher interviews. During this interactive presentation, examples of what teachers should see and hear are explored through student work and explanations. Research-based practices used to foster student's mathematical thinking are discussed, including teacher noticing, questioning techniques and culturally relevant teaching. This presentation is focused on helping educators support all students develop their mathematical.

Student Ownership of Math Mastery (3-5, 6-8)

Presented By: Jean Ann Adams, Clay Tilford (Carlisle County Middle School)

Room: Dixiana/Lane's End

Description: As teachers, we know exactly what the expected outcomes are of each lesson. Do your students know what is expected of them? We will share how we engage our students in taking ownership of their learning and target mastery. Students are led to see their responsibility in the group and help each other to master learning targets. Mathematical dialogue is opened up student to student and teacher to student that encourages mastery of targets at each individual student's pace. Through the use of charts, sentence strips, and student data notebooks, students can track their own progress of mastering grade level targets that are directly connected to Common Core. We will share digital copies of the tools that we use in our classrooms.

Moving Students toward Flexible Computational Strategies (K-2, 3-5)

Presented By: Mollie Gabrielson (US Math Recovery Council)

Room: Terrace Ballroom

Description: In this session, we will visit the progression of counting types and discuss the underlying complexities of children's counting-based strategies. Counting strategies for addition and subtraction are significant advancements for students, but it is critical that students' progress beyond counting-by-ones to other strategies that are based on 'structuring numbers'. Students need to develop much more knowledgeable ways of adding and subtracting numbers. In this session, we will explore how to support students in their development of more efficient ways to develop accuracy, flexibility, and fluency within addition and subtraction 20 and beyond.

Breakout Session #7: 9:15am-10:15am

Leveraging Technology for Student Voice, Reflection & Feedback in the Math Classroom (All Grade Levels)

Presented By: Cheyenne Mills (Edvergent Learning)

Room: Salon AB

Description: Voice and a sense of mathematical identity are vital to student's growth in the math classroom and technology makes it easier to provide opportunities for voice, reflection, and feedback than ever before. Teachers will walk away from this session with several techy tools in their tool-belt to enrich their students' math lives. The presenter will



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demonstrate utilizing Flipgrid, Notability, Padlet, Showme, and other tech tools in an interactive, classroom like setting, to allow students to connect with each other's' math voices and create a digital community of mathematicians.

I'm Advantage Math Recovery (AVMR) trained...Now What? (K-2)

Presented By: Krista Mayfield (Mary Todd Elementary School)

Room: Salon C

Description: Whole Group...Small Group...Independent work...Grade Level Content? How am I supposed to incorporate Add+VantageMR® (AVMR), too? This session will focus on the classroom teacher and ways to weave AVMR constructs and strategies throughout your daily instruction. You will leave with practical ideas to help you apply your AVMR knowledge, not only in your math block, but also your entire school day.

Fostering a Growth Mindset through the Integration of Math and Literature (All Grade Levels)

Presented By: Cheryll Crowe Johnson, Katrina Salley (Asbury University)

Room: Salon D

Description: The integration of literature in mathematics classrooms can inspire and engage students in grades K-12. Students are more likely to gain a deeper appreciation and understanding of math through the use of story and connections to their community of learners and real life, fostering the growth of a mathematical mindset. This presentation will highlight several ways to utilize children's books to teach math concepts to elementary, middle, and high school students. Participants will review grade level literature and evaluate texts to determine exemplars for math instruction in the K-12 classroom. Specific examples of math activities will be generated, and a bibliography of children's books will be shared during the presentation. Participants will leave the session with clear and practical ways to integrate literature and math in their classroom.

How to Know What They Know: Designing Your Own Assessments (K-2)

Presented By: Nick Harris (Madison Kindergarten Academy)

Room: Salon E

Description: 'Don't reinvent the wheel.' 'Buy something off TPT.' 'Just use the test from the curriculum.' 'Yeah, but is it rigorous?' 'Accountability.' The rhetoric around assessment can be...frustrating. We assess. We benchmark. We use data to drive our instruction. We progress monitor. But do we really know what they know? The world of assessment has become so muddled with buzzwords and stress that it's easy to lose sight of the purpose of testing. At the end of the day, what we really want is to know what's going on inside the minds of our students. And sometimes the only way to do that is to roll up our sleeves and design the test ourselves. Come talk about unpacking the standards, troubleshooting existing assessments, and designing test items that really get at student learning and mastery. Basically: come learn to reinvent the wheel. Let's roll.

Rich Problem Solving Activities in the 9-16 Curriculum to Foster Mathematical Minds and Communities (9-12, Post-Secondary)

Presented By: Jay Schiffman (Rowan University)

Room: Salon F

Description: The NCTM Content and Process Standards, The Common Core Standards for Mathematical Practice and the work of Peg Smith and Mary Kay Stein among other luminaries in the field of mathematics education all aspire to foster mathematical minds and create a community of learners. This hands-on workshop will focus on solving rich problems in the 9-16 curriculum and beyond that comport to this mission. Problems will be selected from the areas of algebra, geometry, number, discrete mathematics, pre-calculus and calculus that are non-routine in scope, utilize technology judiciously, have multiple pathways towards their solution, encourage perseverance, raise questions leading to additional inquiry and have participants reason quantitatively and abstractly. Moreover, these problems are amenable to many grade levels and fit the mindset that good problems do not expire over time and are amenable to extensions and potential future explorations. Participants will hopefully feel invigorated at the depth of these problems and the wealth of opportunities they present and be willing to share their findings with everyone after initially working in small groups..

Let's Give Students Numbers to Talk About (3-5, 6-8)

Presented By: Johnathan Rogers, Tara McMahan (Henry County Middle School)

Room: Salon HG

Description: Middle school students love to collaborate and talk to their peers. As math educators, we can harness this love for collaboration by using number talks within our classrooms. 'Let's Give Students Numbers to Talk About' looks at how teachers can use number talks to ensure these intentional conversations enhance mathematical learning. This presentation will be an interactive discussion that shows how giving student's number talks can be a powerful tool that math teachers use to increase rigor, encourage critical thinking, promote number sense, and display multiple strategies to solving problems. The focus of this presentation is to give middle school math educators some examples on how to incorporate number talks into their lesson plans to help foster mathematical minds and build a math communi



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It's fun, it's engaging, it's MATH! (Pre-K, K-2, 3-5)

Presented By: Bethany Neel, Devin Farthing (Daniel Boone Elementary)

Room: Darby Dan/Calumet

Description: Are you looking for new ways to get your students excited and engaged in reasoning about mathematics? Come experience tasks that can be adapted for any grade level as quick class starters up to multi-day projects. We will share our use and extension of Steve Wyborney's digital resources including Splat!, Estimation Clipboard, and Subitizing Sets, including how we foster community and connections within and between classrooms.

▲ Escape Room Workshop (3-5, 6-8, 9-12)

Presented By: Cliff Mims (Pearson)

Room: Dixiana/Lane's End

Description: This is not your normal workshop session environment. Put your problem-solving and teamwork skills to the test to unlock the clues and solve the mystery to escape! Strategies and cooperation are critical to success in this challenge. Experience problem-solving and mathematical modeling activities that can be used in the classroom in this lively and challenging Escape Room context!

Building Math Thinkers is All About Asking the Right Questions (K-2, 3-5, 6-8)

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

Presented By: Marian Small

Room: Terrace Ballroom

Description: Using rich open questions is the perfect way to meet our responsibility to make math accessible to our struggling students, but also to stretch all of our students. In this session, we will explore many such questions and will examine strategies for teachers to create their own. There is no doubt- everyone will leave with great questions to use right away!



Breakout Session #8: 10:30am-11:30am

▲ From Gaps to Growth: Moving Students towards Multiplicative Automaticity (3-5)

Presented By: Dina Mendola (US Math Recovery Council)

Room: Salon AB

Description: Many students struggle with basic facts and fluency. Finding a balance between conceptual understanding & automaticity can be challenging! Come explore strategy-based approaches that build bridges towards automaticity through units coordination and the prioritizing of number relationships. We will dig deep into unraveling the mystery as to why some students struggle and how we can use intentional instruction that will further develop their understanding and serve as a catalyst for larger values and automaticity!

Climate Change - Model Mathematically Data from the Climate Reality Project Training with Al Gore Grades (6-8, 9-12, Post-Secondary)

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

Room: Salon HG

Description: Obtain the most current data and information about climate change, its causes and its consequences. Have your student's model this significant data using the mathematics that they are studying. And have them discover the correlations among various sets of data. Find out what we learned from attending the Climate Reality Project Leadership Training with former vice president Al Gore (An Inconvenient Truth) this past August for three days. Help your students become more socially aware of this important issue with excellent applied mathematics. Obtain all materials: data, student worksheets, teacher notes and solutions, and a detailed step-by-step blog. Works with all graphing technologies. Grade 8 through college.

Take a Journey Along the Number Sense Trajectory! (K-2)

Presented By: Katie Jacobs (Paris Elementary School)

Room: Darby Dan/Calumet

Description: Join this session to take a journey along the Number Sense Trajectory! At every stop of this journey, participants will be introduced to each of the trajectory's seven concepts for number sense with clear descriptions and examples. The journey will also reveal the purposeful and intentional sequence of the concepts in order to properly guide instructional planning. Participants will be provided with a wealth of appropriate activities at each of the destinations that



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will support student understanding for each of the seven concepts. We hope that you will take the first step to depart on this journey by joining us to learn together!

Math Time Management and Small Groups in Early Elementary (Pre-K, K-2)

Presented By: Ryan Fugitt (Boston School)

Room: Dixiana/Lane's End

Description: Are you tired of the same ol' boring math routine? Are your kids not getting enough small group or personalized attention? Come to this session and reignite you and your student's passion for math. In this session, participants will get ideas on how to structure a primary grade math block. Topics discussed will include fluency, calendar, whole group instruction, and math small group rotations with RTI/intervention. Participants will also get ideas and materials to supplement current instruction. Discussion will revolve around how to build critical thinking in a mathematics classroom, and participants will also learn more on how to integrate technology and hands-on learning into a primary math block.

Early Math and Literacy: A Powerful Pair (Pre-K, K-2)

Presented By: Julie Adams (KCM)

Room: Bluegrass Pavilion

Description: Did you know that you can use reading strategies to teach math as well? We will take a look at the similarities of the practice standards of these subjects in order to help young minds to grow! In this session we will explore the commonalities of these strategies and simple ways to help students to make the connections in reading and math problem solving skills. Resources will be shared!

JOIN US FOR A COMPLIMENTARY LUNCH!

11:30 AM – 1:00 PM

Grand Ballroom



KEYNOTE ADDRESS

Dr. Dan McGee

The Kentucky Center for Mathematics

Breakout Session #9: 1:15pm-2:15pm

Developing Computational Thinking in K-5 (K-2, 3-5)

Presented By: Ellen Maddin (Northern Kentucky University)

Room: Salon AB

Description: Once upon a time, educators asked whether or not all children should be literate in the principles of computer science (CS). Today, the question is not "Who should receive instruction in CS?" but "When should instruction in CS begin?" Researchers at Cornell University believe that "computational agency" achieved through learning foundational skills in computer science, is just as important as "linguistic agency" i.e., having the skills and tools necessary to understand and decode written English language. Logically, the path that leads to computational agency should run parallel to the path that leads to linguistic agency. By introducing computational thinking skills in the early grades, when children are beginning to read and write, teachers help children acquire key concepts in math while preparing them to thrive in a world that is increasingly digital. In this session the presenter will demonstrate K-5 mathematics lessons using Scratch and ScratchJr, children's programming tools that were developed at MIT. Participants are encouraged to bring computing devices to explore activities and view lesson plans and teaching materials.



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Orchestrating Productive Mathematical Discussions (All Grade Levels)

****2 HOUR PRESENTATION: 12:45pm-2:45pm****

Presented By: Peg Smith (University of Pittsburgh)

Room: Salon C

Description: Discussions around high-level tasks-tasks that promote reasoning and problem solving - are key to developing students' conceptual understanding of mathematics. Participants will explore the five practices, a model of what you can do before and during instruction that gives you some control over the discussion and helps ensure that the key mathematical ideas targeted in the lesson are made public. Following an overview of the practices participants will engage in a subset of the practices and analyze and discuss artifacts (e.g., videos, student work samples) drawn from classrooms in which teachers are successfully implementing them. Participants will leave the session with new insights regarding how to plan for and manage classroom discussions.



WORD-UP - Math Check: Working with math students to Organize Mathematical Strategies, create Mathematical Rigor, and Develop a Mathematical Mindset with an Unceasing Permanent Math Check to deepen and intensify Community and Communication with our team partners -Parents (K-2, 3-5, 6-8)

Presented By: Alvia Littleton (Freedom Elementary / Christian County Public Schools)

Room: Salon D

Description: "WORD-UP" Math Check is a very high energy intensive hands-on session in which mathematical strategies will be introduced to help engage students and organize their mathematical thoughts enabling them to provide quality independent work and assessments. An 'Unceasing Permanent Math Check' is filter through which this session runs. This filter is the continuous expanding mathematical knowledge that is used to build our students 'math brain' and by doing a continuous check ensures that it is being used and updated as needed with both our students and their parents. Some math students feel that there is a secret code word which has not been shared with them. Students feel without this code word that mathematical concepts are unattainable and that they cannot interpret and/or communicate mathematics effectively. "WORD-UP" Math-Check addresses and develops the mathematical mindset of today's students as they enter your classrooms. "WORD-UP" will use movement and music to create mathematical rigor through activities that are engaging and interactive. The conclusion of this session is the sharing of materials, ideas and practices to develop, deepen and intensify math communities and communications with your parents to make them a needed team partner in the creation of a 'Proficient math student'. "WORD-UP" Math Check is the code word that will open up your math classrooms to empowered students and parents.

Get On Your Feet - GET UP AND MAKE IT HAPPEN! (All Grade Levels)

Presented By: Jeani Gollihue (Greenup County High School)

Room: Salon E

Description: Don't be Charlie Brown's teacher "wa wa wa wa" Let me share some simple strategies to get your students on their feet and engaged in learning. These strategies are so easy to implement you can use them in your classroom tomorrow. Although these techniques can be used in any subject area, I will be using my 33 years of classroom mathematics experience to tailor all examples to elementary through adult mathematics topics. These strategies not only help students become active participants, but they also provide formative assessment and offer interpersonal communication opportunities. So what are you waiting for? Connect your students to learning....connect them to each other... LET'S GET UP AND MAKE THIS HAPPEN!

I can do all of THAT with a ten frame? (Pre-K, K-2)

Presented By Sally Zaring (Painted Stone Elementary), Libby Pollett (University of West Alabama)

Room: Salon F

Description: Join us as participants create their own visual representations of early primary standards as seen on a ten grid. Addition, subtraction, even/odd numbers, fact families, fluency, missing addends, word problems, and even algebraic thinking can be taught through this powerful tool. What seems like a simple graphic is imperative to young students because visual images are transferrable to different mathematical concepts. Strong images lead to deeper understanding of number sense. This interactive demonstration will remind you how fun early numeracy can be!

It Takes A Village (to develop multiplicative thinking) (3-5)

Presented By: Laura Summersett, Cindy Townsend (Mary Todd / Fayette County)

Room: Salon HG



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Description: Join us as we examine the transition from manipulatives to symbolic representations in our journey to foster mathematical minds and communities. From arrays to area models and partial products to standard algorithm, participants will explore a progression of models to develop multiplicative thinking from 3rd to 5th grade (and beyond). Participants will engage with hands on models and leave the session with ideas to implement in the classroom to advance student multiplicative thinking.

Real World Applications of Functions - Using the Engineering Design Process to model structures (9-12)

Presented By: Kelly Lindsey (Boone County High School)

Room: Darby Dan/Calumet

Description: How do teachers connect Algebra with the Real World? When students learn about functions, they often ask how this content is used. The applications of functions are wonderful because they are evident everywhere. Come see how an Algebra class can be used to expose students to Real World modeling that uses functions. Through an open-ended task to model a tunnel, students explore how design decisions are made. This project is the result of a National Science Foundation grant administered at the University of Cincinnati for teachers to learn to bring Engineering Design into classrooms. In the session, we will see how Algebraic Functions, their properties, and domain restrictions can be used to connect students to the Real World. We will see how my students approached the choices that engineers face whenever trying to build a structure and how group work affects choices. We will take a look at how to make such a project work and discuss why this project helped my students see value in their Algebra work. Come see the models they built using the functions they learned about. Participants will also have discussion about how to design a project for their classes and how it can increase critical thinking and decision-making skills. Our project is adaptable to various time frames and can be interwoven with content study of functions. Leave with ideas about using this process in your classes. The goal is student engagement and finding the JOY in the math!

Ways to Spiral the Curriculum in Middle School Math (6-8)

Presented By: Chasity Lowery, Rachel Dial (Glasgow Middle School)

Room: Dixiana/Lane's End

Description: Do you often find yourself wondering how to best review materials you've covered early in the school year with students? Do you struggle with ways to spiral your curriculum? We want to share the successful strategies we've used in our middle school classroom. These will assist you in creating formative assessments that will measure student's mastery of those non-negotiable math skills that each student needs to be successful. Through interactive discussion and sharing of free classroom and online resources, we hope to show you ways to engage your students and best meet their individual needs.

Minimizing the Matthew Effect (All Grade Levels)

****2 HOUR PRESENTATION: 12:45pm-2:45pm****

Presented By: Sara Van Der Werf

Room: Bluegrass Pavilion

Description: The Matthew Effect is a phenomenon sometimes summarized by the adage "the rich get richer and the poor get poorer." How do we catch-up students in our classes that are not academically ready to be there? How can we help create classrooms where all students are engaged in doing important mathematics? How we as educators, leaders, schools and districts answer these questions will have a great impact on 'ALL' students making growth as mathematicians.



Breakout Session #10: 2:30pm-3:30pm

Using Quick Images for Basic Fact Fluency (K-2)

Presented By: Kim Hunt (Eastside Elementary)

Room: Salon AB

Description: This presentation will focus on the use of quick images including finger patterns, regular and irregular dot patterns as well as ten frames as a way to practice basic facts. Ideas for kindergarten fluency to 5, first grade fluency to 10 and second grade fluency to 20 will be presented in the format of strategies such as +0, +1, +2, doubles, doubles +1, make ten and mental strategies to 20. See how to use color coding and screening objects to scaffold and support student learning.



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Video Impact (All Grade Levels)

Presented By: Sarah Shaffer, Judy Winkler, Tiffany Brock, Ashlie Griggs (Madison County Schools)

Room: Salon D

Description: This presentation will inform teachers, coaches, and administration on how the use of video in schools can have an impact on teaching practices. Sample videos will promote conversations around planning, professional development, instruction, and reflection. Emphasis will be placed on how video can make individuals more accountable for their actions and how it can motivate them to want to make improvements. Video provides a clear picture of reality, which is critical for setting meaningful goals and monitoring progress toward those goals. There is power in seeing yourself doing what you do!

Skip the Tricks! Strengthen Fraction Foundations (3-5, 6-8)

Presented By: Meghan Oliva, Michael Dennis (Eminence Independent School)

Room: Salon E

Description: Why are students (and some teachers) so afraid of working with fractions? Let's skip the tricks and strengthen our fractions foundations in order to build a better conceptual understanding of fractions. In this hands-on session, participants will examine the progression of fraction understanding, engage in activities around fraction models, and experience ways to nurture confidence in this common obstacle!

Building Academic Conversations using Math Language Routines (K-2, 3-5)

Presented By: Jana M Bryant, Kendal Quinton (Davie County Public Schools)

Room: Salon F

Description: Math Language routines, done regularly, can benefit ALL students, though they are particularly supportive of our students struggling with the linguistic components of math and our English Language Learners. Participants will learn to scaffold tasks and amplify language so students can make their own meaning, and strengthen the opportunities and supports for helping students to describe clearly their mathematical thinking to others, orally, visually, and in writing and in constructive mathematical conversations (pairs, groups, and whole class). The ability to reason mathematically is strongly linked to mathematics language development. This session will explore Stanford University's Understanding Language framework.

Writing + Talking about Math = Student Success (K-2)

Presented By: Angela Miller (Red Oak Elementary)

Room: Salon HG

Description: We ask our students to write every day. Often this writing is limited to writer's workshop and to read and respond. Why are we not asking them to write about what they learned in math? Or, even what they noticed or wondered about in math? Students who write and talk about math, become members of a community of learners, sharing strategies, using key vocabulary terms and communicating with their peers mathematically. Writing and talking about math fosters organization of thought processes while encouraging students to explain and explore math at a deeper level. Learn more about ways to introduce and use math writing and talking in your classroom.

Using Conceptual Understanding to Foster Mathematical Minds and Communities (6-8, 9-12)

Presented By: Lynn Smith (EdReports.org)

Room: Darby Dan/Calumet

Description: The development of students' conceptual understanding of mathematics presents multiple ways in which teachers and students can foster mathematical minds and communities. An interactive discussion focused on various examples from instructional materials will compare and contrast conceptual understanding with procedural skills and application and highlight ways for teachers to develop conceptual understanding of mathematics within high school students. Coherence with mathematical content from Grades 6-8 will be discussed, and the intersection of the standards for mathematical practice with conceptual understanding will be explored as well. The interactive discussion around the development of conceptual understanding within high school students will also touch upon analyzing materials without using depth of knowledge scales.

Building the Mathematical Community through language, literacy and culture (K-2, 3-5)

Presented By: Kristie Manley (Kenwood Elementary)

Room: Dixiana/Lane's End

Description: Come and learn about how to develop a strong mathematical community that embraces all students. Language, literacy, and culture are personal attributes of each and every student, and an integral part of learning mathematics. Strategies, approaches, and practices will be presented to advocate for equitable teaching for all students creating a mathematical community that flourishes.



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New Math Game

COMP10 - A New Math Card Game

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A fast and competitive game of numbers and strategy. Initially created for inner city youth of the non-profit 5:30 Scholars Program. Students play 5-10 minute rounds to improve flexible thinking, spatial skills and build number sense by practicing addition, subtraction, subitizing, geometry and more. A fun and easy game kids and adults will love to play!

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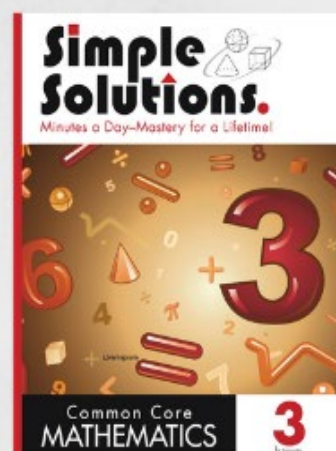
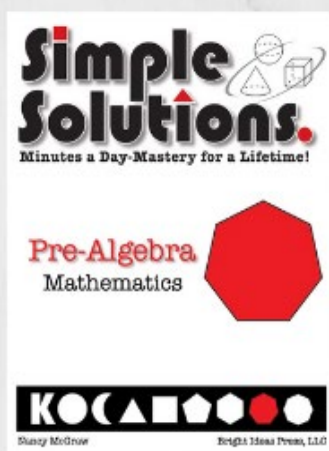


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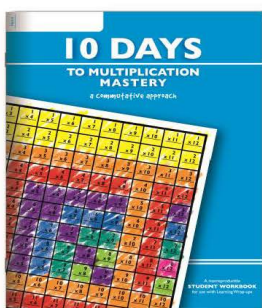
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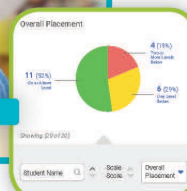
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Save-the-Date:

The KTCM conference
will be Saturday,
September 7, 2019

Speaker proposals
open soon!

Membership in KCTM provides:

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

Classroom Teacher Support Grants

Purpose: to encourage and support the efforts of classroom teachers in the development and implementation of innovative teaching strategies in the field of mathematics:

- Maximum of two grants per year
- Maximum of \$500 per grant awarded
- Awarded at the MESA Banquet during Fall Conference
- Grant recipients will either present their project at next Fall Conference or write an article for the KCTM Newsletter.
- Additional information and applications are available on the KCTM website.



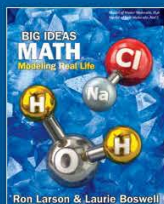
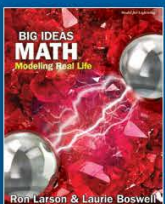
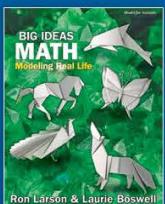
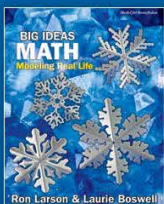
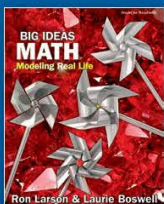
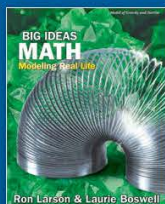
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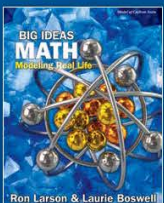
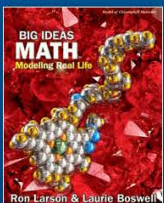
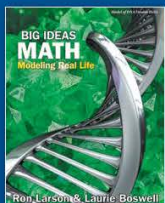
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Grades K–5



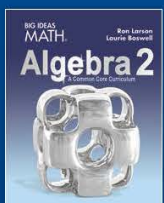
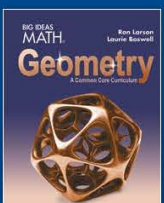
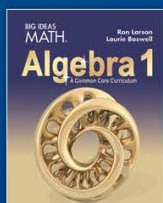
Grades 6–8



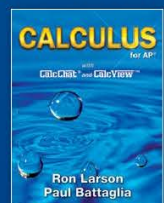
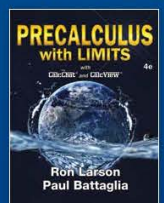
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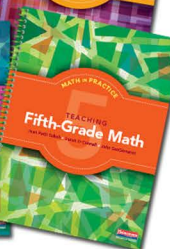
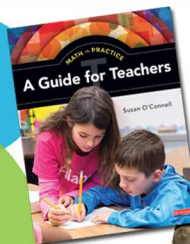
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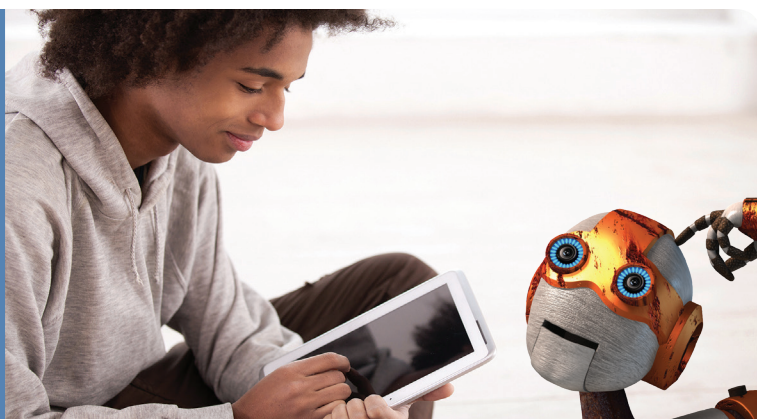
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