

**Friday, December 1, 2017 – Preliminary Program (Subject to Change)**

- 1 First Timer's Session** 7:45 AM-8:00 AM  
Ann McCoy (mccoy@ucmo.edu) Windsor I  
General University of Central Missouri  
If this is your first MCTM Fall Conference, you'll want to attend this session. You'll learn about MCTM and receive great tips on how to gain maximum benefits from the Conference.
- 2 Teachers2Teachers - Serving Others By Becoming a Partner With a Teacher Overseas** 8:15 AM-9:45 AM  
Terry Goodman (goodman@ucmo.edu) General Bradley  
Do you love to travel and have a passion for sharing your expertise and experience with other teachers, while also learning from them? Then come to this session to learn about opportunities to work with teachers in other countries through Teachers2Teachers; truly a life-changing experience! The presenter will share his T2T experiences working with teachers in Guatemala and Ecuador.
- 3 Personalized Learning: The Power of ALEKS** 8:15 AM-9:45 AM  
Debbie Bruns (debbie.bruns@charter.net) Vendor  
McGraw-Hill Education Expo Center  
Does your math class have students with a wide range of ability levels? See how ALEKS, an internet-based learning system, can help you become a more effective teacher through individualized instruction and assessment with up-to-the-minute data to inform your instruction.
- 4 Problem Solving Superpowers** 8:15 AM-9:45 AM  
Sandy Humbyrd (shumbyrd@hollisterschools.com) Middle  
Hollister R-5 School Parliament I  
KaPow! Unleash your students' problem solving superpowers! We will explore creative ways (hands-on puzzles, online sites, and real-world scenarios) to help your students use their superpowers to persevere through tough problem solving battles. Additional Speaker(s): Jenny Holman

- 5 What are the CHANCES?** 8:15 AM-9:45 AM  
Crystal Roskop (croskop@clintoncardinals.org) Elementary  
Clinton School District Parliament II  
Improve the LIKELINESS of student understanding by teaching number sense through probability. Engage in a SAMPLE of lessons designed to motivate students while balancing conceptual and procedural activities. Participants are CERTAIN to identify common misconceptions and leave with classroom ready activities. Additional Speaker(s): Emily Combs
- 6 Sorting, Scavenging, Communicating: Oh, My!** 8:15 AM-9:45 AM  
Melanie Dowell (melanie.dowell@raytownschools.org) Secondary  
Raytown C2 Schools Parliament III  
Experience structures through activities and writing that will take any basic worksheet to make it fun and engaging! There will be an emphasis on creative ways to communicate in math classes. Electronic device needed. Additional Speaker(s): Sarah Morales
- 7 Impact of Number Talks in the Elementary Classroom** 8:15 AM-9:45 AM  
Kim Spencer (kim.spencer@harrisonvilleschools.org) Elementary  
Harrisonville Cass R-9 Picadilly's  
Frustrated by a lack of number sense in your students? Number talks may be the answer! Join us to explore the use of number talks in elementary classrooms to support number sense, mental computation, and mathematical confidence. Additional Speaker(s): Wendy Courter
- 8 MoCSM Annual Business Meeting (MoCSM Session)** 8:15 AM-9:45 AM  
Nevels Nevels (nnevels@hazelwoodschoools.org) General  
Hazelwood SD Polo  
This will be the annual business meeting for Missouri Council of Supervisors of Mathematics. We will be discussing old and new business including plans for the 2018 Summer Conference in June 2018.

- 9 Linear Lunacy** 8:15 AM-9:45 AM  
 Robert Rowe (rrowexp@yahoo.com) Secondary  
 Columbia College Truman  
 Linear functions are a problem for some algebra students whether it be in graphic form or otherwise. Experience a variety of linear problem sizes, problem formats, and solution techniques. Bring your TI-84+ CE for a fabulous linear download.
- 10 Godzilla vs. King Kong..Who Would Really Win?** 8:15 AM-9:15 AM  
 Joann Barnett (mathematicalmama@hotmail.com) Middle  
 Windsor I  
 Using proportional reasoning to answer life's most important questions.
- 11 Creating a Classroom Culture of Embedded Formative Assessments** 8:15 AM-9:45 AM  
 Kelsey Brown (kbrown@camdentonschools.org) Secondary  
 Camdenton R-3 Windsor II  
 How do you embed formative assessments to check for student understanding and keep students academically engaged with a productive effort? Come see how we embed formative assessments daily with or without technology to help guide instruction and encourage student perseverance. Additional Speaker(s): Sharon Moehle
- 12 Positioning English Learners to Be Leaders in Your Classroom** 8:15 AM-9:45 AM  
 Erin Smith (emsxh3@mail.missouri.edu) Elementary  
 University of Missouri Windsor III  
 In this interactive session, we will discuss what positioning is, how positions can affect English Learners in the mathematics classroom, and instructional strategies to enhance English Learners'™ position to facilitate mathematical learning.
- 13 Making sense of fraction division beyond invert and multiply** 8:15 AM-9:45 AM  
 Sheunghyun Yeo (syhw6@mail.missouri.edu) Middle  
 University of Missouri-Columbia Windsor IV  
 Fraction division can be challenging. How do your students make sense of this complex process? Participants will explore a spectrum of strategies from using intuitive representations to making connections with other arithmetic operations for helping students build "fraction sense".  
 Additional Speaker(s): Cris Sheffel
- 14 How to Prepare Students for MCTM Contests** 10:00 AM-11:30 AM  
 Sonya Land (sonya@mathisfun.org) General  
 University of Missouri St. Louis Bradley  
 We will discuss common topics found on the MCTM Elementary, Middle, and High School Contests as well as common mistakes made by students on the 2016 contests. You will receive materials to immediately try with your students in before/afterschool settings.
- 15 Problem Solving for Fun and Profit** 10:00 AM-11:30 AM  
 Larry Campbell (larrycampbell@missouristate.edu) Middle  
 Parliament I  
 We are well into the 21st Century in a rapidly changing technological society. A Problem-Solving environment continues to be an (perhaps THE?) important tool to help us adapt to changing needs, skills, and topics in the middle school. We take a look at some old and new favorites, explore how to help create a PS atmosphere, and have some fun as well!
- 16 Multiplying...More Than Just Facts!** 10:00 AM-11:30 AM  
 Natalie Moon (nataliemoon@mail.ozark.k12.mo.us) Elementary  
 Ozark School District Parliament II  
 Help students overcome multiplication struggles by focusing on visual representations and meaning. Students need to make connections and build flexibility using a variety of strategies. Leave this workshop with strategies and tools to help students deepen their understanding of multiplication.

- 17 A Graphical Approach to Quadratic Functions** 10:00 AM-11:30 AM  
 Zandra de Araujo (dearaujoz@missouri.edu) Secondary  
 University of Missouri Parliament III  
 This session explores an innovative way to introduce students to quadratic functions by exploring the products of linear functions. In emphasizing the graphical representations of quadratic functions, students can engage deeply in sense-making and draw connections to linear functions.  
 Additional Speaker(s): Sheunghyun Yeo, Wenmin Zhao
- 18 Divide and Conquer: Division of Fractions** 10:00 AM-11:30 AM  
 Natalia Bailey (nataliajudithbailey@yahoo.com) Elementary  
 University of Central Missouri Picadilly's  
 Why invert and multiply when dividing fractions? In this session, we'll leave the algorithms at the door and explore fraction division by using word problems and reasoning. After this workshop you'll leave ready to explain two algorithms for dividing fractions.
- 19 Differentiate with Google** 10:00 AM-11:30 AM  
 Samantha Herrington (samantha.herrington@sjsd.k12.mo.us) Secondary  
 Central High School (SJSJ) Polo  
 MoCSM presents... One of you, thirty kids, and four topics to remediate. Not a problem with Google. See how to use Google Slides to easily remediate multiple topics without the headache.  
 Additional Speaker(s): Amanda Tolen, Tessah Wood
- 20 Using Project-Based Learning (PBL) to Embed STEM in the Math Classroom** 10:00 AM-11:30 AM  
 Brendon Thiry (brendon\_thiry@idschools.org) General  
 Independence School District Truman  
 Want your students to drive the learning process? Develop an inquisitive mindsight? Create authentic products for an audience beyond the teacher? View examples of projects in the math classroom geared towards STEM. Leave with tons of available resources and an outline of a project to immediately implement. Computers encouraged.
- 21 The Geometry of Fractals** 10:00 AM-11:30 AM  
 Chip Day (cdayfract@charter.net) Secondary  
 STLCC-Florissant Valley Windsor I  
 A fractal is a set of iterated transformations. We will look at how to construct fractals in Geogebra, MS Word, and on a graphing calculator; describe the transformations used as a formula; and consider the geometric properties which result.
- 22 Finding Joy in the Midst of Alligators** 10:00 AM-11:30 AM  
 Patrick Sullivan (patricksullivan@missouristate.edu) Secondary  
 Missouri State University Windsor II  
 Almost sixty years ago Walt Disney, scouting for a location of a new theme park, flew over a wasteland southwest of Orlando where alligators outnumbered people, and said, "That's it!" Today, it is the world's most popular travel destination. How does Walt Disney's experience relate to our classroom practices? Come to this session to re-imagine classroom teaching and learn ways to make tomorrow's class magical!
- 23 Deal Me In: Card Games that Grow Number Sense** 10:00 AM-11:30 AM  
 Brian Swink (bswink@nwmissouri.edu) Elementary  
 Northwest Missouri State University Windsor III  
 Scrap drill-and-practice worksheets in favor of interactive, card games to master essential skills including counting, basic facts, place value, fractions and probability. These games reinforce learning or remediate deficiencies for older students. Additional Speaker(s): Jennifer Swink
- 24 Conjecture Me This, Batman** 10:00 AM-11:30 AM  
 Adam Harbaugh (aharbaugh@missouristate.edu) Middle  
 Missouri State University Windsor IV  
 Batman's sense of wonder and curiosity always was his mysterious superpower. Conjecturing and proving are often scarce, but essential in mathematics classrooms. Participants will experience the observe-conjecture-experiment-prove cycle with examples, including functions, geometry, and number theory. Additional Speaker(s): Kurt Killion

- 25 Lunch /Annual Meeting (Your nametag is your ticket!)**  
 11:30 AM-1:15 PM  
 Expo Center  
 Buffet begins at 11:30 a.m. and ends promptly at 12:00 p.m.  
 Business Meeting begins at 12:00 p.m.  
 Keynote Speaker begins at 12:30 p.m.  
 Cindy Bryant and Joann Barnett
- 26 Math-a-Magic: Brain Breaks that add Magic to Math**  
 1:30 PM-2:30 PM  
 David Ewing (ewing@ucmo.edu) General  
 University of Central Missouri Bradley  
 Astonish your students by 'math-a-magically' reading their minds and telling them the number or card they have secretly chosen or winning a 'fair' game every time! Add magic and mystery, plus good math, to your spare teachable moments.
- 27 Mad about Mean, Median, Mode and M.A.D.** 1:30 PM-2:30 PM  
 Bob Glasgow (bglasgow@sbuniv.edu) Middle  
 Southwest Baptist University Parliament I  
 Understanding statistical measures requires more than just calculation methods. This session will examine the use of visual representations to explore the middle school concepts of mean, median, mode, and mean absolute deviation (M.A.D.).
- 28 Conceptual Understanding to Computational Fluency**  
 1:30 PM-2:30 PM  
 Amanda Schweissguth Elementary  
 (amanda.schweissguth@washington.k12.mo.us) Parliament II  
 Washington School District  
 Come explore how to bridge student understanding from concrete, pictorial, and abstract representations. Effective practices to introduce, practice, and assess various strategies will be shared. Leave with tools & ideas that will help students achieve the flexibility needed to reach fluency.
- 29 Project Based Learning in Geometry** 1:30 PM-2:30 PM  
 Sandy Branstetter (sbranstetter@osceola.k12.mo.us) Secondary  
 Osceola School District Parliament III  
 Working towards project based learning and hands-on activities is a goal of mine for my geometry class especially. Come see some of the projects I was able to incorporate to help students learn and get excited about the mathematics. We will look at several projects throughout the session as well as get access to resources to help you incorporate them and others into your classroom. Come see what kinds of things you might want to give a try in your classroom. HS or MS Geometry Ideas
- 30 Early Algebra in the Elementary School** 1:30 PM-2:30 PM  
 Natalia Bailey (nataliajudithbailey@yahoo.com) Elementary  
 University of Central Missouri Picadilly's  
 In this session we will examine number sentences that provide elementary students an opportunity to develop their algebraic reasoning. We will also discuss different strategies that students may use when approaching these problems.
- 31 An Approachable Method for Understanding and Making Sense out of Fractions.** 1:30 PM-2:30 PM  
 Nevels Nevels (nnevels@hazelwoodschoools.org) Elementary  
 Hazelwood School District Polo  
 This session will demonstrate the accessibility and power of using a linear model to understand fractions and operations between them. Most students never get an opportunity to learn or be exposed to this model.  
 Additional Speaker(s): Michelle Prather
- 32 Diagram Use in High School Geometry** 1:30 PM-2:30 PM  
 Ruveyda Karaman (rk5f7@mail.missouri.edu) Secondary  
 University of Missouri Truman  
 This session will present sample student works on high school geometry proofs. There will be a discussion about what meanings students draw from the diagrams in the problems. Instructional implications to improve students effective use of diagrams will be presented.

- 33 Productive Mathematical Discussions** 1:30 PM-2:30 PM  
Marilyn Meals (mealsm@fgsmai.org) Middle  
Fair Grove Schools Windsor I  
A "road map" for conducting productive mathematical discussions in middle school classrooms will be presented. 5 Practices which support productive discussions are presented as a foundation as well as the phases of the class discussion. Opportunities for practice are provided.
- 34 Lost in Space: Bone Density** 1:30 PM-2:30 PM  
Tracey Zak Johnson (tzakjohnson@yahoo.com) Secondary  
Fort Worth Texas Windsor II  
This session will explore the problems of traveling in space, with regards to loss of bone density. Participants will use regression to estimate how long an astronaut can safely stay in space. The data comes directly from NASA and is a fun way to introduce regression.
- 35 Grading Practices that Promote a Growth Mindset** 1:30 PM-2:30 PM  
Jennifer Swink (swink@maryviller2.com) Elementary  
Maryville R-2 Windsor III  
Grades can do more than report a score. Come and learn how to motivate deeper learning through your grading practices. We'll analyze student mistakes on assessment items to report progress and plan for future learning. Additional Speaker(s): Brian Swink
- 36 Making the Mean Not So Mean** 1:30 PM-2:30 PM  
Alyssa Bracamonte (ambracamonte@spsmail.org) Middle  
Springfield Public Schools Windsor IV  
The meaning of the mean; a hands-on approach. Engage in student-centered activities you can use tomorrow to move understanding from concrete to abstract. It's not just "add em all up and divide".  
Additional Speaker(s): Valerie Cantu
- 37 Twitter Chat with MCTM** 2:45 PM-3:45 PM  
Natalie Moon (nataliemoon@mail.ozark.k12.mo.us) General  
Ozark School District Bradley  
Whether you are a twitter pro or don't have an account... all are welcome! Come and learn about the amazing collaboration and learning that happens during twitter chats. It is like professional development you can attend at home in your pajamas! You will experience an actual twitter chat together so bring a phone or device with you.  
Additional Speaker(s): Amanda Schweissguth
- 38 Fostering Mathematical Discourse in the Elementary Classroom** 2:45 PM-3:45 PM  
Gigi Goodall (GGoodall@cainc.com) Vendor  
Curriculum Associates Expo Center  
Have you struggled in engaging students in conversations around mathematical concepts? Come and learn strategies and best practices to foster Mathematical Discourse in your classroom. This session will focus on students engaging in "productive struggle" with appropriate scaffolds for support and questioning each other using mathematics arguments to establish the correctness of solutions.
- 39 Monopoly Madness** 2:45 PM-3:45 PM  
Sheila Hansen (hansensheila@mtvernon.k12.mo.us) Middle  
Mount Vernon R-5 Parliament I  
One of the difficulties with teaching reasoning to students is that they don't have experiences to connect new learning to. Monopoly can help give kids experiences using math in situations other than worksheets. From ratios to reasoning, it's all there.
- 40 Building Number Sense with Number Talks** 2:45 PM-3:45 PM  
Lori Breyfogle (lori.breyfogle@yahoo.com) Elementary  
Fox C-6 School District Parliament II  
Explore this quick yet powerful routine that promotes flexible thinking, student communication, and conceptual understanding for all ages. We will examine talks beginning with dot patterns through fractions and decimals, including how to choose questions, engaging learners, and documentation. Leave with resources you can use as soon as you get back to school. Additional Speaker(s): Angie Schreckenber

- 41 Let's Transform Graphs, Investigate Inverses and Understand Logarithms** 2:45 PM-3:45 PM  
 Sherri DeHart (sdehart753@gmail.com) Secondary  
 Clinton High School Parliament III  
 See a progression of rich investigations and follow up activities to help students understand and apply graph transformations, inverses and logarithms. Help students make connections among these topics in order to strengthen their understanding and improve their mastery.
- 42 Turning Sighs to Smiles in Math Class** 2:45 PM-3:45 PM  
 Kaitlyn Baker (kdbaker@spsmail.org) Elementary  
 Springfield Public Schools Picadilly's  
 Hearing the dreaded sound of student sighs as you begin your math instruction? Searching for ways to get students to enjoy mathematics? Find out how growth mindset, the mathematical practices, and mathematical discourse can increase student understanding, positivity, and confidence.
- 43 Reflections from a Math Brawl survivor (MoCSM Session)** 2:45 PM-3:45 PM  
 Chip Sharp (chipsharp27@gmail.com) General  
 Retired Polo  
 This session will explore the challenges of implementing a new math program. The difficulties experienced with reform math or common core highlight our need to learn from our past, so we can avoid it also being our future. (Answers provided)
- 44 Teaching Geometry with GeoGebra** 2:45 PM-3:45 PM  
 Ann Schnurbusch (anschnurbusch@semo.edu) Secondary  
 Southeast Missouri State University Truman  
 Help your students understand geometry using GeoGebra. Learn how to use GeoGebra as you complete activities that explore simple to more involved geometric properties. Bring a device (tablet, computer, or phone) and download program at [www.geogebra.org](http://www.geogebra.org).
- 45 Weight Loss that Works: Loose up to 3000 wasted words a day!** 2:45 PM-3:45 PM  
 Robin McMeekin (nurturedlearning@yahoo.com) Elementary  
 Ozark School District Windsor I  
 Loose the weight of constant discipline problems! Regain control of your classroom physique and reduce the size of negative behavior immediately! Strategies and techniques that will burn 3000 words a day! Whatever the lesson, you will have more time for it.
- 46 Missouri Math Pathways** 2:45 PM-3:45 PM  
 Tamela Randolph (trandolph@semo.edu) Secondary  
 Southeast Missouri State University Windsor II
- 47 Problem of the Day** 2:45 PM-3:45 PM  
 Florence Minor (fminor@csprings.k12.mo.us) Elementary  
 Climax Springs R-4 Schools Windsor III  
 Problem solving, subitizing, math talks, mathematical practices, learning standards. The demands teachers face are endless, while instructional time is limited. Learn how one teacher meets these demands with an engaging and practical approach, while maintaining time for curriculum and content.
- 48 Let's Talk About Math!** 2:45 PM-3:45 PM  
 Lisa Broadbent (lisabroadbent@mail.ozark.k12.mo.us) Middle  
 Ozark Middle School Windsor IV  
 Be amazed with students defending their solutions and strategies and collective understanding of mathematical concepts! Number talks are mental math questions students solve using multiple strategies. Start number talks in your classroom, write purposeful questions, and get all students engaged!
- 49 FAME Grant** 4:00 PM-5:00 PM  
 Joann Barnett (mathematicalmama@hotmail.com) General  
 Bradley  
 This session is for you if you need money for mathematical ideas. Learn all you need to know to apply for a FAME Grant for your K-16 classroom. Application requirements will be discussed, past winning grants perused, and questions answered.

**50 Ed Camp** 4:00 PM-5:00 PM  
Bob Borst (bborst@cpsk12.org) General  
Columbia Public Schools Expo Center  
What can YOU share at this conference? Every teacher has a voice to share, and teachers are always hungry for great ideas. Bring your interests/questions, and then this session will take off, splitting into mini-sessions to put laser focus on your interests. Let's gather together where every teacher has a voice!  
Additional Speaker(s): Brian Swink, Ryun Deckert

**51 Growth Chart Math** 4:00 PM-5:00 PM  
Sheila Hansen (hansensheila@mtvernon.k12.mo.us) Middle  
Mount Vernon R-5 Parliament I  
Make math fun by using what students are most interested in, themselves. Middle school students are growing quickly. By keeping a chart of their heights, you have tons of data you can use throughout the year in many different activities!

**52 Fraction Multiplication: Learning Through Analysis and Discussion** 4:00 PM-5:00 PM  
Anna LaForest (anna.laforest@washington.k12.mo.us) Elementary  
School District of Washington Parliament II  
Considering putting the process last? See activities, which can teach fraction multiplication number sense, estimation, and computation without teaching an algorithm first. Visual models partnered with pattern discovery and discussion can lead to a better student (and teacher) experience.

**53 ELL Supports in Algebra Textbooks: Their Suggestions and Our Improvements** 4:00 PM-5:00 PM  
Amy Dwiggin (add39c@mail.missouri.edu) Secondary  
Macon High School Parliament III  
How do ELL supports in three widely-used Algebra textbooks compare with what is known about ensuring these students have access to high quality mathematics? We will consider the textbooks' suggestions and how research can inform modifications to these supports.  
Additional Speaker(s): Erin Smith, Zandra de Araujo

**54 Principles to Action: Supporting Productive Struggle while Learning Mathematics** 4:00 PM-5:00 PM  
Marilyn Cannon (marilyncannon@raytownschools.org) General  
Raytown School District Polo  
How do we make struggle productive? Effective teaching of mathematics consistently provides students, individually and collectively, with opportunities to engage in productive struggle as they grapple with mathematical ideas and relationships. Based on principles to Action publication, this session will focus on one of the 8 most critical teaching practices - Supporting Productive Struggle.

**55 Algebra and rich problem solving associated with 21st Century careers: a bridge to opportunity** 4:00 PM-5:45 PM  
Lane Walker (lhwalker1337@gmail.com) Secondary  
Francis Howell School District Truman  
Learning algebra through rich tasks, students experience 21st Century careers. Unlike word problems that turn students off, these problems tend to motivate students to master algebra as they see and sense the relevance through explorations, modeling activities, and free apps.

**56 It's All About that Math, 'bout that Math... 'bout that Math!!!** 4:00 PM-5:00 PM  
Cindy Bryant (mo.mathgal@gmail.com) Middle  
Windsor I  
Research shows that effective mathematics teaching includes practices that provide a variety of learning opportunities for students. Join this session as we look at powerful practices, awesome activities, and even a song or two for promoting problem solving and thinking in mathematics!

**57 Active Hands, Active Brains: Engaging Geometry Activities and Projects** 4:00 PM-5:00 PM  
Tessah Wood (tessah.wood@sjsd.k12.mo.us) Secondary  
Central High School (SJS) Windsor II  
Get students thinking out of their seats and working together. This session will provide you with several activities to keep your geometry students engaged. Additional Speaker(s): Mandi Tolen, Samantha Herrington

**58 Making Math Visible in Word Problems** 4:00 PM-5:00 PM  
Meredith Beggs (Mbeggs@ucmo.edu) Elementary  
University of Central Missouri Windsor III  
"What do I do with the numbers?" If you have students who ask this question when given a word problem, then this session is for you! Learn how to use a bar model or tape diagram to help students make sense of a word problem and the relationships between numbers.

**59 Baiting the Hook to Reel In Your Students** 4:00 PM-5:00 PM  
Tiffany Jones (tiffanyjones@nixaschools.net) Middle  
Nixa Public Schools Windsor IV  
Bring mathematical standards to life in your classroom by creating meaningful problems that will engage your students during each unit of study. Participants will receive resources for finding such problems and sample rubrics. Additional Speaker(s): Erin Powell

**60 Start a Chapter of Mu Alpha Theta at Your High School**  
5:15 PM-5:45 PM  
Deanna Wasman (DWasman@cpsk.12.org) Secondary  
Columbia Public Schools Parliament III  
Mu Alpha Theta is a national mathematics honor society. Mu Alpha Theta provides a method for schools to recognize and encourage students who enjoy and excel in mathematics; rewards outstanding extracurricular achievement by offering awards, scholarships and grants to students and faculty.

**61 MAT^2 Meeting** 5:15 PM-5:45 PM  
( )  
Polo

**62 Affiliates Meeting** 5:15 PM-5:45 PM  
Renee Deken (rdeken@icsjackson.com) General  
Immaculate Conception-Jackson Windsor I  
Enjoy a meet and greet with present MCTM affiliates! All affiliates are welcome to attend, or even if you are interested in becoming an affiliate, please stop by to learn more about what becoming an affiliate could mean for you.

**63 Reception for the State Presidential Awardees** 5:45 PM-7:30 PM  
Ann McCoy (mccoy@ucmo.edu) Open to All-Reception  
Picadilly's  
Everyone is invited to attend this reception to recognize and honor our MCTM Outstanding Educators and the PAEMST Nominees. Your name tag is your ticket!

## Saturday, December 2, 2017

**64 Breakfast and Door Prizes** 7:30 AM-8:30 AM  
Expo Center  
Buffet begins at 7:30 a.m. and ends promptly at 8:15 a.m.  
Your name tag is your ticket!

**65 Google in the Math Classroom** 8:30 AM-10:45 AM  
Mandi Tolen (amanda.tolen@sjsd.k12.mo.us) General  
Central High School SJSB Bradley  
"You can't use technology in the math classroom." YES YOU CAN! We will show you how to use Google Suite for Education in your classroom to transform how you teach and how students learn. Can be adapted for any grade. Additional Speaker(s): Samantha Herrington, Tessah Wood

**66 Prof Dev Series K-2** 8:30 AM-12:00 PM  
Alice Buckner, Myra Collins  
Parliament I  
This session is designed for teachers who were enrolled in the Empowering Teachers and Students in the Mathematics Classroom summer series for grades K-2. Please see the registration desk for more information.



**67 Prof Dev Series 3-5** 8:30 AM-12:00 PM  
Amanda Schweissguth, Natalie Moon, Tammy Stine  
Parliament II

This session is designed for teachers who were enrolled in the Empowering Teachers and Students in the Mathematics Classroom summer series for grades 3-5. Please see the registration desk for more information.

**68 Prof Dev Series 6-8** 8:30 AM-12:00 PM  
Joann Barnett, Renee Deken, Maida Russell  
Parliament III

This session is designed for teachers who were enrolled in the Empowering Teachers and Students in the Mathematics Classroom summer series for grades 6-8. Please see the registration desk for more information.

**69 "Scratch"ing the Surface and Minding the Gap** 8:30 AM-9:30 AM  
William McNear (wwmcneary@semo.edu) Elementary  
Southeast Missouri State University Picadilly's  
Scratch is a simplified coding environment that can be utilized in multiple ways. In an introduction to the coding environment, attendees will learn to build simple scripts. Presenter will also demonstrate a more significant script built to model/compare fractions.

**70 Prof Dev Series 9-12** 8:30 AM-12:00 PM  
Bob Glasgow, Carrie Stone, Patrick Sullivan  
Polo

This session is designed for teachers who were enrolled in the Empowering Teachers and Students in the Mathematics Classroom summer series for grades 9-12. Please see the registration desk for more information.

**71 Making the Most of Flipped In-Class Time** 8:30 AM-9:30 AM  
Samuel Otten (ottensa@missouri.edu) General  
University of Missouri Truman

Flipped instruction is much more than videos! In this session we will share examples of flipped lessons and engage attendees in discussions of how teachers can structure in-class time for maximum interactivity and learning, problem solving, classroom discussions, and feedback.  
Additional Speaker(s): Wenmin Zhao, Zandra de Araujo

**72 Accessible and Rigorous Mathematics for English Learners** 8:30 AM-9:30 AM  
Zandra de Araujo (dearaujoz@missouri.edu) Elementary  
University of Missouri Windsor I

In this highly interactive session, we will explore the cognitive and language demands of mathematics tasks and the ways in which these aspects impact English learners. We will also explore examples of linguistically accessible tasks that are also cognitively demanding.  
Additional Speaker(s): Amy Dwiggins, Erin Smith

**73 Exploring the Connection Between Recursive Sequences and Composition of Functions** 8:30 AM-9:30 AM  
David Kapolka (dkapolka@iserv.net) Secondary  
Forest Hills Northern HS (emeritus) Windsor II  
Multiple representations of recursive sequences are examined through iterative techniques. Various learning styles are addressed through modeling of real-world situations. Participants will discover how handheld technology promotes algebraic thinking and a deeper understanding of sequences, functions, and limits, to help students move from algebra to calculus.

**74 A Curriculum Guide: Exploring Careers in STEM**

8:30 AM-9:30 AM

Ashley Beard (arb96410@ucmo.edu)  
Sedalia 200Secondary  
Windsor III

Are you interested in incorporating STEM into your classroom? If so, come learn about and participate in activities that will promote STEM education to your students. We will explore four careers within STEM while ensuring that you still meet standards.

**75 Top Tech Tools for Math**

8:30 AM-9:30 AM

Lisa Broadbent (lisabroadbent@mail.ozark.k12.mo.us)  
Ozark Middle SchoolMiddle  
Windsor IV

Websites, apps, and extensions that purposefully incorporate technology into your math lessons! Learn about FREE tech tools for middle school/junior high mathematics that are tested and student approved. Please bring your own electronic device.

**76 Establishing a Student Math Circle**

9:45 AM-10:45 AM

Blake Thornton (bthornton@wustl.edu)  
Washington UniversityMiddle  
Bradley

A math circle brings students who enjoy the fascination of mathematics together with an instructor who leads the exploration of intriguing topics. We will discuss how to start a Student Math Circle and the logistics of running it. Teachers will participate in two sample activities. Additional Speaker(s): Allison Bender

**77 Using student evidence in a coaching cycle: A Teacher and Coach Perspective**

9:45 AM-10:45 AM

Toni Gallia (tgallia@fz.k12.mo.us)  
Fort Zumwalt School DistrictElementary  
Picadilly's

What makes a successful math coaching cycle? See how using student evidence, formative assessments, co-planning, and co-teaching all work together. This presentation will be from both the perspective of a math coach and a math teacher sharing challenges, successes, and struggles. Additional Speaker(s): Melissa Hirschbuehler

**78 Adding and Subtracting using Watertank Math**

9:45 AM-10:45 AM

Jason Kazar (jason@watertankmath.com)  
Watertank MathGeneral  
Truman

Using a new visual and contextual approach to adding and subtracting integers, Watertank Math will help teachers connect with their students and the four operations: adding, subtracting, adding a negative, and subtracting a negative in a more engaging way.

**79 Love to Teach Math? Be a Math Specialist**

9:45 AM-10:45 AM

Meredith Beggs (mbeggs@ucmo.edu)  
University of Central MissouriElementary  
Windsor I

Do you love to teach math? Do you enjoy working with other teachers? If so, being an elementary math specialist is an option to consider! This session will provide information about Missouri's elementary mathematics specialist certification and examples of activities from a program of study leading to the certification. Additional Speaker(s): Ann McCoy

**80 Linear Relationships???**

9:45 AM-10:45 AM

Tracey Zak Johnson (tzakjohnson@yahoo.com)  
Fort Worth TexasSecondary  
Windsor II

Examine real life correlations such as BMI vs hours of TV watching, SAT scores vs GPA, Marijuana sales vs divorce rate and many others. Participants will take several evens and determine if they would have a positive or negative correlation. This session will be fun and interactive.

**81 Mathematical Modeling: Implications for Teaching**

9:45 AM-10:45 AM

Wenmin Zhao (wenminzhao@mail.missouri.edu)  
University of MissouriSecondary  
Windsor III

Feeling frustrated by the overabundance of contrived word problems? This session will engage attendees in a modeling activity about exponential functions. Attendees will then compare modeling tasks with conventional word problems and also explore how modeling can enrich mathematics instruction. Additional Speaker(s): Samuel Otten

- 82 Expanding Students' Understanding in Algebra** 9:45 AM-10:45 AM  
 Ruveyda Karaman (rk5f7@mail.missouri.edu) Middle  
 University of Missouri Windsor IV  
 Students are expected to develop the algebraic concepts such as equals sign and variables in middle grades. This session will address student results from conceptual measures to highlight Algebra 1 students struggles on algebraic concepts. Recommendations for instructional strategies will be presented.
- 83 Activities for Student Math Circles and Math Teams** 11:00 AM-12:00 PM  
 Rick Armstrong (rickarmstrongpi@gmail.com) Middle  
 St. Louis Community College-Florissant Valley Bradley  
 Teachers will participate in several student math activities which will demonstrate both the distinction and the overlap between Math Circles and Math Contest practices.
- 84 Two student driven solutions to gamify your Math class** 11:00 AM-12:00 PM  
 Heather Miller (hmiller@everfi.com) Elementary  
 EverFi Expo Center  
 Attendees will gain access to a web-based resource that is available at NO COST: Hockey Scholar is a course brings science concepts to life using the exciting, game of hockey. Through immersive simulations, students explore real-life applications of science concepts. Summer Slugger is a math & literacy program to help students avoid the summer slump by providing them with forty interactive baseball-themed challenges throughout the course.
- 85 Number Sense thrives when you Subitize!** 11:00 AM-12:00 PM  
 Toni Osterbuhr (toniosterbuhr@gmail.com) Elementary  
 Pre K-6 Math Consultant Picadilly's  
 Experience subitizing power; a skill that can be nurtured and needed for flexible thinking. Learn engaging ways to encouraging ALL students to utilize Quick Looks to learn facts naturally; achieving abstraction needed for fact fluency. Give-Aways!
- 86 Delving into Mathematics Anxiety: The Origins, Causes, and Effects on Students K-12** 11:00 AM-12:00 PM  
 Alexandra Archer (akarcher@sbuniv.edu) General  
 Southwest Baptist University Truman  
 A discussion on the origins of math anxiety, its influence on students in various grade levels, and the environmental influences that shape students' opinions regarding math. Research based on surveys of regional students, teachers, and parent. Additional Speaker(s): Rebecca Altiz
- 87 Evaluating Videos for Flipped Instruction** 11:00 AM-12:00 PM  
 Zandra de Araujo (dearaujoz@missouri.edu) Middle  
 University of Missouri Windsor I  
 We will discuss a research-based framework of key characteristics for evaluating videos for flipped instruction. Attendees will be invited to share their experiences selecting and/or designing instructional videos, followed by a discussion of innovative ways of utilizing flipped videos. Additional Speaker(s): Samuel Otten, Wenmin Zhao
- 88 Parametrics for Beginners** 11:00 AM-12:00 PM  
 David Kapolka (dkapolka@iserv.net) Secondary  
 Forest Hills Northern HS (emeritus) Windsor II  
 Parametric representations on the graphing calculator including functions and their inverse, projectile motion in three different "physics" applications, baseball, classic train problem, Lissajou figures, complex roots and powers, rose curves, and conics will be explored. The exploration handout will include step by step solutions and screen shots.
- 89 Guiding Meaningful Math Conversations** 11:00 AM-12:00 PM  
 Diana Piccolo (dpiccolo@missouristate.edu) Secondary  
 Missouri State University Windsor III  
 This presentation will show how middle and high school math teachers use strategies and processes of guiding meaningful math conversations, in an effort to engage students in meaningful discourse. The math content focus will be data analysis and probability but strategies discussed are applicable to other math content areas.

**90 Mathematics for the Differentiated Classroom** 11:00 AM-12:00 PM

Melody Burns (mxb13560@ucmo.edu)

Middle

University of Central Missouri

Windsor IV

This presentation includes lessons and activities for engaging the middle school mathematics classroom. These lessons include tips for differentiating for students including gifted students and those with math anxiety. Additional Speaker(s): Bill McGalliard