Session 1 [8:30am-10:00am]

The Importance of STEM Education w/ Bill Miller; K-12... Parents and educators play a key role in introducing STEM activities to students and fostering students’ interest throughout their school years in fun, exciting ways. For example, schools across the country are engaging kids in STEM in the afterschool hours through robotics competitions such as FIRST. Robotics challenges help students explore STEM activities in a cool, sports-like atmosphere. Other ways parents and educators can help is by pairing their students with science mentors in the community, participating in the local science club and infusing interesting, hands-on experiments into science curriculum.

Fractions in Korean Mathematics w/ Janice Grow-Maienza; K-5... This will describe how fractions are developed systematically and coherently in grades 2 through 6 in Korean mathematics with a focus on the underlying meaning of fractions, multiple representation of number and consistent use of the number line across the curriculum. She will describe also how the CCSSs reference the Korean curriculum. The NSF funded English translations of the 6th National Primary Mathematics Curriculum of Korea, titled *gecko mathematics*, will be used to demonstrate the principles.

Pearson.com w/ Megan Donnelly & Jessica Elbern; 9-College... Using MyMathLab, MyMathTest, & MyFoundationsLab for remediation, assessment, & course redesign.

Math Vocabulary w/ Cathy Arnold; K-8... This session will focus on using literature to introduce and teach math vocabulary and concepts. Participants will use explicit vocabulary techniques.

Math, The Brain, and Poverty w/ Laura Reed; 9-12... Utilizing the latest poverty related brain results enables us to develop instructional strategies that maximize the potential for increasing student motivation and success. Differences between the effects of urban and rural poverty will be highlighted, associated instructional and course designs will be examined, and participants will engage in activities that demonstrate vital components of a model that has proven success.

Inquiry-Based Learning to Engage Higher Level Thinking w/ Charles Souza; 6-12... By using the same training methods medical students at the John A. Burns School of Medicine use to diagnose and treat patients, teachers can engage students in higher level thinking through this innovative learning process. Students gather facts from a story, formulate questions, and determine what other information is needed to answer their own questions. During the process, students may also address additional learning issues that are of personal interest to them, giving them ownership over their own learning.

Interactive Activities for Algebra I w/ Edmar Ramos & Amelia Cook; 6-12... Hands-on activities help to increase rigor and relevance in Algebra I and incorporate CCSS Mathematical Practices. Participants will get to experience Math Labs from the CORD Algebra I curriculum.
**Singapore Math and Model Drawing 1 w/ Laura Fukumoto & Saundra Takara; K-8...** Math students in Singapore score consistently at the top among nations. One reason is Singapore's emphasis on Model Drawing, a powerful problem-solving strategy that makes difficult math problems and concepts visual. The session explores this strategy and links it to the thinking and teaching models. Participants solve difficult problems without algebra but by using algebraic thinking -- beginning with simple problems and progressing to more difficult ones.

**Excel in the Classroom w/ Catherine Walker; 6-12...** In this session several uses for Excel will be presented including student activities and gradebooks. I will also help to answer "is it possible to..." and "how do you..." type questions. It is recommended that participants bring a laptop with Excel so that they can play along, but it is not required.

**Session 2 [10:40am-12:10pm]**

**The Importance of STEM Education w/ Bill Miller; K-12...** Parents and educators play a key role in introducing STEM activities to students and fostering students' interest throughout their school years in fun, exciting ways. For example, schools across the country are engaging kids in STEM in the afterschool hours through robotics competitions such as FIRST. Robotics challenges help students explore STEM activities in a cool, sports-like atmosphere. Other ways parents and educations can help is by pairing their students with science mentors in the community, participating in the local science club and infusing interesting, hands-on experiments into science curriculum.

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**CCSS for Mathematical Practice w/ Michael Long; 9-12...** How are the habits of mind being emphasized in the CCSS? Classroom activities in Algebra I, Geometry, and Algebra II that enhance these habits will be modeled.

**Exploration of Mathematical Treasures w/ Monique Chyba; K-8...** The session will be divided into two parts. The first part will consist of a presentation about the beauty and importance of mathematics. It will provide a new perspective from the mathematician’s point of view. The presentation will include many engaging and exciting illustrations.
and applications that might be surprising to the audience as part of a very sophisticated mathematical process. The goal of the presentation is to provide the teachers with a new vision of mathematics to share with their students. The second part of the talk will focus on mathematics activities based on exciting research projects. Research projects conducted at UH Manoa will be revisited to be accessible to the mind of elementary and middle school students and lesson plans based on those will be proposed to the teachers. This will be done with the common core state standard in mind, and with a special emphasize on the fourth one: Model with mathematics.

Math, The Brain, and Poverty w/ Laura Reed; 9-12... Utilizing the latest poverty related brain results enables us to develop instructional strategies that maximize the potential for increasing student motivation and success. Differences between the effects of urban and rural poverty will be highlighted, associated instructional and course designs will be examined, and participants will engage in activities that demonstrate vital components of a model that has proven success.

The Mathematical Practices of CCSS w/ Linda Venenciano & Hye Jung Kim; 6-12... The CCSS describes eight standards for mathematical practices expected of all students. Can you recognize them? This session will help teachers make sense of the Mathematical Practices by showcasing problem solving activities that help to develop students' expertise. We will solve problems, analyze the mathematics, and discuss pedagogical techniques teachers can use to create opportunities for their students to practice mathematical ways of thinking.

Math-Whizz: The Perfect Digital Math Tutor Kevin Judd; K-8... Math-Whizz is the most engaging and effective online tutoring program available. Correlated to Common Core Standards and used in nearly 100 schools in the DOE, the program teaches, motivates, reinforces skills and raises achievement for students.

Singapore Math and Model Drawing 2 w/ Laura Fukumoto & Saundra Takara; K-8... Math students in Singapore score consistently at the top among nations. One reason is Singapore's emphasis on Model Drawing, a powerful problem-solving strategy that makes difficult math problems and concepts visual. The session continues the Singapore Math and Model Drawing PART 1 Session, progressing to more and more difficult problems.

Best Practices: Factoring Trinomials w/ Bethany Matthews; 9-12... Learn a great way to teach factoring trinomials $Ax^2 + Bx + C$ with coefficients $\geq 1$ that utilizes a graphic organizer allowing students to
check multiple guesses. Also will demonstrate how students can make an easy to use foldable that will assist them in picking the correct signs for their factors. Receive a CD of self-created factoring powerpoint lessons, worksheets, and even a fun factoring BINGO game.

Session 3 [1:15pm-2:45pm]

**Graphing is Good for You! w/ Lane McIntosh & Jonathan Brown; 6-12...** In this session, you will approach graphs in a whole new light! You will be guided through interesting applications of graph theory with two mathematics graduate students, both who work on the SUPER-M Project (School and University Partnership for Educational Renewal in Mathematics). Come prepared to learn some exciting mathematics that you may never see otherwise!

**ORIGAMI: Octagonal Star w/ Meryle Hirotsu; 6-12...** Paper-folding (origami) can help Geometry students with properties of shapes. This hands-on experience is fun and exciting.

**Best Practices According to CCSS w/ Deyon Nagato; 9-12...** "The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students." Come to this session to better understand these mathematical practices and think about how you might apply them to your classroom.

**Wolfram Tools for Students and Teachers Michael Ida; 9-College...** WolframAlpha, the Wolfram Demonstrations Project, and Wolfram Mathematica are explored as tools for student engagement and teacher productivity.

**Integrating Mathematics and Economics w/ Lance Suzuki & James Uy; 9-12...** An interdisciplinary discussion of topics that integrate Algebra, Statistics, and Calculus with Economics.

**Simulating with Excel w/ Sean Moroney; 9-College...** Microsoft Excel has capabilities that lend itself to simulations. This lecture will focus on applications to probability and statistics.

**Teaching Rationally: Developing Understanding of Fraction Operations w/ Mary Pat Sjostrom & Joe Peters; K-8...** What does it mean to divide two fractions? And why do we invert and multiply? This session will focus on the meaning of operations, extending students’ knowledge of whole number operations to rational numbers. Facilitators will provide real world problems involving fraction operations, and will guide participants in using a variety of
manipulatives, including Cuisenaire Rods, and a Smart Board to visualize these operations. We will also examine an alternative algorithm for fraction division.

**Why Singapore Math? w/ Daniel Kitashima; K-8...** Come and find out what all the hype is about. Why everyone is talking about and looking into this math curriculum from a tiny island country of Singapore. Learn the history, the research, and the pedagogy of this world leading math program, and leave saying, "Why didn't I learn math like this?" Don't be the last to get on board!

**Inspiring Formative Assessment with TI-Nspire Navigator w/ Debbie Kula; 9-12...** You delivered a great lesson. Your students were focused and engaged. But did they get it? How will you know? How will they know? Explore the possibilities for meaningful formative assessment in the Pre-Calculus classroom with TI-Nspire and TI-Navigator technology.