

**NCTM Meeting in San Francisco**  
**STEM-related Sessions**  
**April 13-16, 2016**

**110- Building a Mathematics Growth Mindset**

Thursday, April 14, 2016: 11:00 AM-12:00 PM

3012 (Moscone)

Lead Speaker: Tujuana Greene Hinton

Students do not need the “math gene” to succeed in mathematics. Come learn how the use of micromessaging, self-monitoring, and other techniques can help reduce inequality in the classroom, improve student achievement, and open the doorway to STEM careers. *Grades 8-10*

**81- The Art of Engineering for Elementary Grades**

Thursday, April 14, 2016: 9:30 AM-10:30 AM

Golden Gate C3 (Marriott)

Lead Speaker: Peter Nosalik

As our society evolves, more engineering challenges will develop that need to be addressed. Children need to be engaged in the process of solving challenges. Our presentation is designed to introduce engineering to younger children with the hope that it inspires them to become engineers themselves while developing math, science, and art skills. *PreK-2 Session*

**134.5- Full STEAM Ahead: How Casio Can Unify Your School's Efforts**

Thursday, April 14, 2016: 11:00 AM-12:00 PM

124 (Moscone)

Lead Speaker: ExWkshp Casio America

In our current educational climate, non-core classes are being cut, budgets are being squeezed, and yet more and more mandates require cross-curricular experiences, sharing of resources, and ingeniously efficient lesson planning. Come and discover how Casio supports complete solutions for your school, including STEM and STEAM professional development, wide-ranging resources that are not curriculum-specific, and even synergistic equipment technology that provides schoolwide benefits.

**209- Putting the M in STEM to Drive Learning**

Thursday, April 14, 2016: 2:00 PM-3:00 PM

3005 (Moscone)

Lead Speaker: Valerie R. Thomas

STEM units engage learners to reason, problem-solve, and think critically across disciplines. Learn the basics of creating and implementing integrated STEM units that are relevant to students. Two classroom-tested STEM units will be presented, along with successes and challenges of these units to help teachers in their classrooms. *8-10 Session*

### **216- Why S.T.E.A.M. Should Be Your Cup of T.E.A.!**

Thursday, April 14, 2016: 2:00 PM-3:00 PM

2022 (Moscone)

Lead Speaker: Jordana Benone

Technology, engineering, and art are the T.E.A. in S.T.E.A.M. education. Whatever your knowledge of or current position on the S.T.E.A.M. initiatives happening across the country, this engaging, interactive session will provoke you to consider why integrating T.E.A. in a mathematics curriculum should be your cup of tea!

### **383- Using Art to Develop Girls' Measurement Skills**

Friday, April 15, 2016: 11:00 AM-12:00 PM

2007 (Moscone)

Lead Speaker: Tia L. Flores

Co-Speaker: Lynda R. Wiest

Girls, especially girls from low-income families, display weaker measurement knowledge than boys. Geometric measurement—such as linear measurement, area, perimeter, volume, surface area, and angle measurement—is integral to STEM performance. This session will provide instructional ideas for helping girls (and boys!) develop measurement skill through art.

### **419.6- Rate of Change . . . It's Not Rocket Science**

Friday, April 15, 2016: 12:30 PM-1:30 PM

125 (Moscone) Lead Speaker: ExWkshp Texas Instruments

As NASA gears up for space missions, their teams think about every aspect from launch to return. TI teamed up with NASA to create a lesson that explores slope through a real problem solved by rocket propulsion experts. Learn how this and other free resources can help engage your students in STEM.

### **456- STEM Gives Meaning to Mathematics**

Friday, April 15, 2016: 2:00 PM-3:00 PM

3009 (Moscone) Lead Speaker: Lukas Hefty

Engineering instruction in K–5 can translate into lasting success in mathematics. Learn how to plan and teach an integrated engineering curriculum that (a) applies measurement and data collection concepts and (b) develops students' ability to communicate, collaborate, and persevere when solving high complexity math problems. *3-5 Session*

### **465.1- STEM Investigations for the Math Classroom**

Friday, April 15, 2016: 2:00 PM-3:00 PM

120 (Moscone)

Lead Speaker: ExWkshp Texas Instruments

Why should students only be doing hands-on learning for STEM in their science classes? Learn how to bring inquiry-based learning into your classroom using investigations that allow students to draw upon math reasoning and skills to solve problems in STEM.

**479- Simple and Rich STEM Activities Using Painless Video Analysis**

Friday, April 15, 2016: 2:45 PM-4:00 PM

2004 (Moscone)

Lead Speaker: Raphael C. Carlson

Co-Speaker: Mike J Reiners

For STEM initiatives to be successful, we need to be teaching more science in our math classrooms, and more math in our science classrooms. Come and participate in rich hands-on experiments that use the camera in your pocket and free software to perform powerful mathematical video analysis. *8-10 Workshop*

**497- Integrated STEM and Model-Eliciting Activities: Making Math More Engaging**

Friday, April 15, 2016: 3:30 PM-4:30 PM

2005 (Moscone)

Lead Speaker: Cathrine Maiorca

Co-Speaker: Micah Stohlmann

This presentation will provide participants with a general description of how Model-Eliciting Activities (MEA) can be used to implement modeling in the classroom and connect to the other STEM disciplines. Participants will take part in a MEA and see firsthand how MEAs can be used in the classroom to motivate and engage students to learn math. *6-8 Session*

**575- STEM Integration: Statistics Is the Connection**

Saturday, April 16, 2016: 9:45 AM-11:00 AM

3011 (Moscone)

Lead Speaker: Karen Togliatti

Co-Speaker: Lindsey Herlehy

In this workshop, participants will engage in two inquiry-based activities designed to challenge them to engineer solutions to problems in thermometry and aerodynamics using data collection, technology, and statistical reasoning. STEM lesson design incorporating mathematical, science, and engineering practice standards will also be discussed. *6-8 Workshop*

**579- Beyond Classroom Walls: "Doing Mathematics" on a Nature Trail**

Saturday, April 16, 2016: 11:00 AM-12:00 PM

3005 (Moscone)

Lead Speaker: Stefanie D. Livers

Co-speakers: Diana Marchant and Sandra Langdon

Beyond the classroom walls, there is a real world full of mathematical opportunities. This session will highlight an e-STEM project that infused a nature trail with mathematics tasks. This project clearly took mathematical principles and put them into action through faculty professional development, task writing, and the creation of a math trail.