

## Overview of Events and Sessions

7:00—8:00	Registration, Continental Breakfast
8:00—8:20	Opening Session in Jewett Hall Auditorium Welcome from the President, Shawn Towle
8:30—9:25	Sessions S1 through S4
8:30—10:00	Workshops W1 through W4
9:40—10:35	Sessions S5 through S8
10:15—11:45	Workshops W5 through W8
10:50—11:45	Sessions S9 through S12
11:45—12:15	Box Lunch in the Café, Fireplace Lounge, and Room 138
12:30—1:15	Keynote Address in Jewett Hall Auditorium Steve Leinwand, <i>The Common Core State Standards for Mathematics: Hopes, Fears and Challenges as We Enter the Brave New World</i>
1:25—2:55	Workshops W9 through W12
1:30—2:25	Sessions S13 through S16
3:00—3:30	Closing Session in Jewett Hall Auditorium Jackie Mitchell Award GIFT Grant Announcements Give-aways
3:30—4:30	ATOMIM Board Meeting (Room 180)
All Day Long	Exhibitors in the Fireplace Lounge

### 8:30-9:25

Session: S1    Room: JH185    3-12

#### **ASSISTments – Immediate Feedback is Powerful**

*Andrew Burnett*

*ASSISTments*

*Josh Frost*

*Deer-Isle Stonington Elementary School*

*Shelley Cyr*

*Hermon Middle School*

Learn how ASSISTments can easily help you formatively assess your students on a daily basis making you a more effective teacher. ASSISTments is a free, online platform that gives both students and teachers immediate feedback while offering teachers the flexibility of either assigning pre-built content or building their own content.

### 8:30-9:25

Session: S2    Room: JH190    9-12, College

#### **Enhancing Calculus and Pre-Calculus with Geometers Sketch Pad**

*Bob McCully*

*Falmouth High School*

Geometers Sketchpad is a versatile cross platform program that lends itself well to visualizing important concepts in Calculus and Pre-Calculus. Some techniques that facilitate using Sketchpad will be demonstrated, as well as sketches that demonstrate how to help enable students to visualize related rates, extreme value, volumes, surface area, area, and other standard calculus topics. A CD of completed sketches will be given to all in attendance.

Session: S3 Room: STC246 6-8

### **I'm Convinced: Through the Show Me app**

*Jenny Jorgensen F. H. Harrison Middle School*

Using the Show Me app can enlighten a student's mathematical understanding and misconceptions. Several students' Show Me recordings will be shared and discussed. Learn about the Show Me app and how it can be used with students. (I'm using it with students who are part of the RTI Tier 2 process.)

Session: S4 Room: STC248 K-5

### **Math Misconceptions in Grades K-5**

*Marilyn Curtis Retired*

Participants will look at various types of research, including misconceptions and their resources, ways of thinking, and difficulties students and teachers encounter in understanding specific ideas within mathematical topics. We will look at activities that will help to identify some of these misconceptions and ways to implement new approaches in the classroom.

**8:30-10:00**

Workshop: W1 Room: JH189 K-8

### **Exploration of the CCSS Progressions (K-8)**

*Michele Mailhot Maine Department of Education*

Bring your laptops to this work session! Participants will work in grade span groups (K-2, 3-5, and 6-8) to explore the progression of student learning with the CCSS. Participants will be provided with digital materials to download and use for our exploration of student learning and the implications for instruction.

Workshop: W2 (Sponsored) Room: JH180 K-5, General Interest

### **Hands-On Place Value: The Digi-Block Method**

*Kate Damon Digi-Block, Inc.*

Using the innovative Digi-Block base-10 manipulatives, participants will model fun and effective hands-on activities, proven to build lasting place value understanding. The method emphasizes guided self-discovery -- students demonstrate the important role of grouping by tens and how numbers are built and taken apart when counting and performing arithmetic operations. Decimals are intuitively understood to be the natural extension of the whole number system. All lessons are fully aligned with the Common Core Standards. Free sample materials provided.

Workshop: W3 Room: JH295 6-12

### **Problem-Solving using Tangrams**

*Elizabeth A. Wood John Bapst Memorial High School*

The Tangram puzzle originated in China hundreds of years ago. According to Chinese legend, tangrams were created when a man dropped a porcelain tile that broke into 7 pieces. When he tried to reassemble the tile, he found that he could create hundreds of different shapes. The puzzle has many mathematical connections to include congruency, similarity, and transformation concepts. In addition, working with the puzzle helps students refine their problem solving skills and strategies (trial and error, visual analysis of space, risk taking, perseverance, and predicting). Session participants will make a set of tangrams from file folders, then will do some explorations with perimeter, area and transformations. Participants will leave with a classroom ready lesson.

**8:30-10:00**

Workshop: W4 Room: JH293 K-2

## **Time and Money: Essential Skills that Build Mathematical Understanding**

*Amy Yankee*                      *MMSA*

In this hands-on workshop we will look at a variety of ways to teach the concepts of time and money. We'll also explore the many ways these life skills serve as building blocks for other mathematical concepts such as place value, multiplication, fractions and decimals.

**9:40-10:35**

Session: S5      Room: JH185      K-8

### **Using Cross-cutting Concepts in the Common Core to Provide Differentiation Strategies**

*Susan J Hillman, Molly MacPherson, Jacki McGarry, Hadleigh Smith*                      *University of New England*

This session will provide a quick review of our process in developing K-8 Scope and Sequence charts that are focused on cross-cutting content from the Common Core State Standards in Mathematics. The value of these charts is that in a quick view, one can see the K-8 scope and sequence of fractions or of algebra or whole number computation, etc. These charts then will be disseminated. Finally, case scenarios will be posed to demonstrate how the charts can be utilized to identify what grade level the child is at and next steps in working with the student.

Session: S6      Room: STC250      3-12

### **The Power of Formative Feedback**

*Cheryl Tobey*                      *EDC*

Effective feedback practices can improve students' mathematics learning - but what are those practices? Come learn some principles of formative feedback, and pick a few to begin using in your own classroom! We will discuss examples of feedback with sample student work, view video examples of the practices in action, and tie these ideas to concepts and practices in the Common Core.

**9:40-10:35**

Session: S7      Room: JH291      General Interest

### **A Four-Graduate Course Series to Prepare Educators for the Challenges of Being a Mathematics Leader**

*Robert H. Jenkins & Margaret Griswold*                      *University of Maine @ Farmington*

This ATOMIM session will present a 4-graduate course series at the University of Maine @ Farmington to prepare educators for the challenges of being a mathematics leader, whether it be a math coach, a math interventionist, an RTI Coordinator, a Title I: Math Teacher or a grade-level team leader. This series will result in a certificate. These graduate courses are offered in a blended format.

Session: S8      Room: JH190      6-8

### **Use of iPads in Teaching Math**

*Mary Belisle*                      *Greely Middle School*

This year I am teaching algebra to a group of middle school students using iPads. I have found some positive aspects as well as some drawbacks. Apps on the ipads are also used in RTI at this school. I will include the use of educreations, gooru and Pearson mobile. Students will also share their experiences.

10:15-11:45

Workshop: W5      Room: JH295    K-2

**Number Talks: Using Children's Books to Develop Number Sense**

*Angela Marzilli      South Portland School Dept*

This workshop for K-2 educators will show multiple ways to use children's books as interactive read alouds that develop number sense. The workshop will use resources such as Number Talks from Math Solutions and accountable talk to help teachers develop a culture of discussing numbers in their classrooms. Teachers will make a rekenrek and other resources as a part of the workshop.

10:15-11:45

Workshop: W6      Room: JH180    6-8

**Real-World Math for Earth's Sake**

*Susan G. Bryant      Ganderia Middle School*

So much of environmental awareness relies on our understanding of mathematics. Discover how algebra, data analysis, problem-solving, measurement and more are all employed in hands-on activities to learn more about human population trends, energy use, land use, climate change and other issues shaping our future on earth. Free CD-ROM of activities!

Workshop: W7 (Sponsored)      Room: JH189    9-12, College

**Fish, Cars, and Recursion**

*Pamela Rawson      Poland Regional High School*

Use spreadsheets to analyze the population of a fish pond, the balance of a car loan, and other situations involving recursive thinking. Participants will be introduced to the TI-Nspire Navigator system and how it can be used to provide immediate insight into student thinking.

Workshop: W8    Room: STC248 K-5

**A Selection of Mathematical Activities for Expanding the Standards for Mathematical Practice in the Lower Elementary Grades (K-5)**

*Michael Fish      Univ of Maine at Machias*

It is my hope that participants will be able to more clearly elaborate on classroom practice through investigating how a selection of mathematical activities meet the Standards for Mathematical Practice and content standards. To meet this goal, participants will examine activities that consider Whole Number (K-2), Algebraic Thinking (K-2), Measurement (K-2), and Geometry (K-5). Brief dialogue will address how materials could be further used in a K-5 mathematics class or in meeting specific Standards for Mathematical Practice.

10:50-11:45

Session: S9      Room: JH190    3-12

**How can NCTM support YOU in Implementing the Common Core?**

*Nancy Zarach      NCTM, Affiliate Rep, Eastern 1*

Where does one go for lesson ideas to match the depth required for the common core? Or for ideas to integrate Reasoning and Proof into your curriculum. I've done the surfing, you get the simplified version of where to search, what you can find along with some classroom ideas for tomorrow.

Session: S10 Room: STC246 K-12

### **Do You Speak Mathese?**

*Allison Perkins* *Portland Public Schools*

The language of math can be as difficult as the math itself for students and is especially perplexing for English Language Learners. In this workshop we will explore the challenges of math language and learn key strategies to help unlock the code for all learners.

Session: S11 Room: STC250 4-8

### **Eliciting Mathematics Misconceptions: Fractions and Decimals**

*Cheryl Tobey and Pam Buffington* *EDC*

This session will provide participants with multiple ready-to-use, easy-to-administer diagnostic assessments designed to elicit prior understandings and commonly held misconceptions related to grades 4-8 rational number concepts in the Common Core. Participants will also learn about and experience an interactive online environment being developed through the Eliciting Mathematics Misconceptions (EM2) Project, which allows teachers to administer the diagnostic assessments electronically and produce reports on each student's misconceptions.

**10:50-11:45**

Session: S12 Room: JH293 PK-4

### **Early Mathematical Thinking: Formative Assessment for Pk-4**

*Amy Yankee* *MMSA*

Early Mathematical Thinking (EMT) is a formative assessment tool designed to help you gain a clearer understanding of your struggling learners. The one-on-one interview helps uncover a student's current level of understanding of numeracy and measurement skills which in turn helps guide future instruction. Come learn more about EMT and the FREE assessment resources available to you.

**1:30-2:25**

Session: S13 Room: STC248 9-12, College

### **Integrating Math and Science in the First Year Curriculum for the B.Sc. Engineering Student**

*Michael P. Davis* *University of Maine*

The University of Maine's Brunswick Engineering program offers students pursuing a B.Sc. in Mechanical, Civil, Electrical, or Computer Engineering a unique approach to their first two years of coursework. After students complete their first two years in Brunswick, they transition to the Orono campus to complete their degree. The Brunswick curriculum differs from the traditional first two years of an engineering degree by taking a project focused, hands-on, integrated approach. Math and science subjects are not taught as separate subjects but rather are integrated together into joint courses and presented in an engineering context. This session will share the strategies used in the development of the first year curriculum. The focus will be on the integration of the first year calculus and physics courses typically taken by all first-year engineering students. Experiences and lessons learned from the first offering of this integrated course will also be shared.

**1:30-2:25**

Session: S14 Room: JH295 K-12

### **The 4 Cs: Integrating Instruction in Mathematics and 21st Century Skills**

*Angela Marzilli South Portland School Department*

This presentation will share ways to highlight the aspects of communication, critical thinking, collaboration, and creativity while teaching mathematics content. Through looking at math not as a subject but as a discipline, it is possible to teach students about the aspects of 21st century skills that are valued within the discipline of mathematics. Creativity in particular will be a highlight, as many students and adults alike don't appreciate mathematics itself as a creative discipline. Attendees will leave this session with specific activities to use in their classrooms.

Session: S15 Room: STC250 3-8

### **The Math Symposium: A Way to Teach Collaboration, Communication, and Problem Solving**

*Jamie Cluchey Levey Day School*

I'd like to share my process for creating and facilitating math symposia in my classroom. A math symposium can be held around any in-depth problem situation and within and math content area. It is a way to teach students to collaborate to solve a problem as well as to communicate their solution to classmates. Beyond that, classmate "expert audience members" learn to be active participants in the presentation, asking questions and holding the presenters accountable to the mathematics community of the classroom.

1:30-2:25

Session: S16 Room: JH180 6-12

### **Engaging Students in Mathematics Through an Interdisciplinary Ecology Research Project**

*Rhonda Fortin, Amy Troiano, Beth Andersen Westbrook High School*

Follow Westbrook High School's journey from a traditional teaching/learning model to a project-based, integrated approach in a 10th grade biology unit. In the standards-based ecology lessons, students will communicate their learning of ecology, while integrating math and ELA CCSS standards. They will demonstrate their ability to consider global perspectives and write scientific explanations using mathematical models as evidence. The session will focus on the thinking, collaboration, and planning process as we work toward the implementation of the Common Core Math and ELA standards and the Next Generation Science Standards.

1:30-2:55

Workshop: W9 Room: JH185 3-12

### **ASSISTments - Formative Assessment using Data**

*Andrew Burnett ASSISTments*

*Megan Allen Vassalboro Community School*

*Chantelle Holmes William S Cohen Middle School*

Formative assessment is not a test, it is a process. The ASSISTments project at Worcester Polytechnic Institute is committed to supporting students, teachers and administrators with this process. This free, grant-funded, online tool supports two key components of formative assessment: feedback and flexibility. Students get immediate performance feedback, teachers get feedback in the form of user friendly item reports, and parents get feedback from automated emails and detailed reports. Teachers have flexibility to use either pre-built content or build their own content. ASSISTments teachers are more effective than non-users because the student data compiled on the platform drives their instruction.

1:30-2:55

Workshop: W10      Room: STC246 6-8

**Prove it! Circle Explorations and Other Cool Geometry for the Middle Grades**

*Ruth Estabrook      New England Institute for Teacher Education*

We will explore several hands-on activities for finding the area of a circle, for discovering "impossible triangles," for folding a circle into many other shapes, and more. See how these exciting geometry activities relate to the Common Core State Standards for Math and how they lead students to use the 8 Standards for Mathematical Practice.

Workshop: W11      Room: JH293 6-12

**Practice Makes Perfect: Engaging Students in the Practice**

*Johanna Lake, Stacy LeBree      Brewer High School*

Like any skill, math is learned primarily through practice. If you cringe at the thought of handing out another worksheet for your students to practice the day's lesson then this is the workshop for you. Come learn how to employ creative, insightful and research-based teaching practices that have been tested and found to be effective. It is important to engage your students with the content through rich and active learning activities and hands-on games. Our students love math class and that is a beautiful thing! One 14 year old male student stated, "Math class is fantastic because of all the activities. We have fun, it's exciting, and I learn a lot!" Come join us for math fun and you may even leave with a couple of Algebra/Math activities that you can try in your classroom immediately!

Workshop: W12      Room: JH289 K-5

**Using Strategies and Games to Master Addition and Subtraction Facts**

*Denise Masalsky      Line Elementary School*

During this session you will learn strategies to help students have addition and subtraction facts become fluent. You will learn and play games to go along with some of the strategies. It will be fun and engaging! You will leave with materials to use right away.