

Spring Conference

Saturday March 29, 2014

7:45 a.m. - 3:30 p.m.



KEYNOTE SPEAKER

Anne Marie Condike

*Mathematics Professional
Development Coordinator*

Massachusetts Department of
Elementary and Secondary Education



Getting Ready for the PARCC Assessment: Implications for Curriculum and Instruction

Hopedale Jr - Sr High School
25 Adin Street
Hopedale, MA 01747
508-634-2217

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WELCOME

The ATMIM Board of Directors welcomes you to the 2014 ATMIM Spring Conference. This year we are celebrating our 111th year of service to the Commonwealth's math teachers with a terrific conference filled with stimulating workshops, informative sessions, a comprehensive list of exhibitors, and a great keynote speaker. We hope you and your colleagues will be able to experience this event. Our Spring Conference has sold out over the past few years, so we caution you not to wait too long to register. Once we have reached capacity, no other registrations will be accepted. Don't be disappointed – REGISTER TODAY!

If you have registered and paid and have not received a confirmation, please contact Kaitlyn Aspell at aspellk@cantonma.org or www.atmim.net.

REGISTRATION

Our registration is being done entirely on-line, and all you need to do to register, is to use the link on the ATMIM website (www.atmim.net). All conference attendees must be pre-registered – no walk-ins will be accepted. The registration costs are detailed near the end of this booklet. Once you have registered on-line, you must still mail a check to the Registrar. Upon receipt of your on-line registration and check, an e-mail will be sent to you.

Plan to arrive early to pick up your registration materials. Registration starts at 7:00 a.m., with the first sessions and workshops beginning at 7:45 a.m.

EXHIBITORS

Make sure to visit with our exhibitors. Exhibits will be open from 7:00 a.m. – 12:45 p.m.

DIRECTIONS

From the North

- **Route 495 S to Exit 20 (MA 85S Cedar St toward Milford)**
- Continue 1.5 mi turn right onto **MA 16 W/E** to Main St.
- Continue 1.6 mi turn right onto **Adin St**
- Continue 1.5 mi – school is on the left

From the South

- **Route 495 N to Exit 19 (MA 109 Milford/Medway)**
- Continue .2 mi then turn left onto **Medway Rd**
- Continue 1.1 mi then turn left onto **MA 16 W/E** Main St.
- Continue 1.9 mi then turn right onto **Adin St.**
- Continue .5 mi – school is on the left

If you need overnight accommodations, please refer to the list of hotels and their websites, at the end of this booklet.

A floor map and room directions will be available on the day of the conference.

Sessions 7:45 - 8:15 am

S1 New Teachers

Anne Collins

Room #146

New Teacher Drop in Discussion Group

All new teachers regardless of grade level experience the same challenges. Share your positive and negative experiences during your first few years.

Sessions 7:45 - 8:45 am

S2 Grades 9-12

Don Barry

Room #142

Making Indirect Proof Feel Natural

We'll look at ways to introduce proof by contradiction that should help students understand, feel, and believe how natural, congenial, and obvious this way of thinking is. We'll also look at the origins of indirect proof and some of its uses.

S3 Grades 6-8

Neelia Jackson

Room #229

Manila Math: Math for Real

Use manila folders to create a learning center with mathematics problems that students can easily access during any unstructured time - before school, homeroom, after school, etc. Problems can also be used for intervention periods. These problems speak to the Mathematical Practices - not tied to any curriculum; many come from the Teaching Mathematics in the Middle School journal. Problems that you can use in class tomorrow. (These could also be used as a Problem of the Week.)

Sessions 8:00 - 9:00 am

S4 Grades 9-12

Donald Cameron

Room #144

Rethinking Mathematics Education in the New Era

The factory-like method of mathematics education we have employed for over 100 years worked well when the learned skills lasted a lifetime. But the age of technology requires us to shift our focus from teaching to learning; from instruction to inquiry; from competitiveness to cooperation. The Common Core Standards represents a significant step towards rethinking mathematics education. This presentation will share some useful technology techniques and pedagogical strategies that support the Common Core Standards while guiding us not only in becoming better teachers, but also in helping our students to become better learners.

S5 Grades 6-8

David Bau & Ellen Metzger

Room #140

Introducing Pencil-Helping Teach Kids to Use Programing as They Use a Pencil

Workshops 8:15 - 9:45 am

W1 **Grades K-5**

Kate Damon

Room #227

The Digi-Block Method: Hands-On Place Value, Number Sense, and Operations

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.

W2 **Grades 6-8**

Barbara West

Room #148

Making Middle School Math Come Alive with Games & Activities

Participants will be actively engaged in working through games and activities about Middle School math topics. Operations on integers will be explored with manipulatives. Activities will be used to introduce or practice some of the basic skills. Participants will do activities with graphing, measures of central tendency, multiplication, play some games with integers and probability and a Silent Board game. They will do a Scavenger Hunt to justify their answers to mathematical situations.

Workshops 8:30 - 10:00 am

W3 **Grades 6-8**

John Bookston

Room #146

**Problem Solving in Middle School Using Real World Problems:
Satisfying You, Your Students, and the Common Core**

I hope that the session I have prepared for you will be useful to you in satisfying the Common Core. Seeing my students' creativity and thought processes reminds me why I went into teaching. In addition to noting incorrect mathematical processes used by students, I also give my students feedback on their strengths and weaknesses in communicating their thoughts. Our students will not likely use the quadratic formula as adults, but will benefit from learning how to communicate effectively and how to work smartly.

Sessions 9:15 - 10:15 am

S8 Grades PK-2

Pam Halpern

Room #142

Stories and Games and Math - Oh My!

Come explore ways of connecting math, children's literature and games to highlight how math reaches far beyond the classroom into real and imaginary worlds. Participants will play math games, each connected to a piece of children's literature, that connect to both the content and practice standards in mathematics. A handout of the games and the corresponding literature will be available.

S9 Grades 9-12

Jim Matthews

Room #229

Geometry and Algebra - Make the Connection with Five Great Problems

Frequently, completely unrealistic exercises are employed in an attempt to integrate geometry and algebra. In this session we will share great problems that naturally integrate these two areas of mathematics. We will also share strategies for using these problems in your classroom. A bonus --some of the problems will definitely pass the "dinner table test".

Sessions 9:30 - 10:30 am

S10 Grades 9-12

Jim Donatelli

Room #144

**CCSS Mathematical Practices - "Use Appropriate Tools Strategically"
with TI-84 and TI-Nspire Technology**

This hands-on session will provide participants with an overview of how the latest TI-84 and TI-Nspire technology address CCSS Mathematical Practice # 5 - "Use Appropriate Tools Strategically". All participants will receive a TI gift and a 90 day trial of TI-84 (Color) SmartView and TI-Nspire Teacher Software. A TI-Nspire CX Handheld or TI-84 Plus C Silver Edition Color Graphing Calculator will be awarded as a door prize.

S11 General

Anne Collins

Room #140

Formative Assessment Addresses Mathematical Practices

This session will examine specific formative assessment strategies and how they seamlessly support the mathematical practices. We will examine conjecture boards and their support of MP3. We will investigate tape diagrams, double number lines, and graphs as we implement MP4 and use evidence of student understanding to inform our instruction. We will explore representations for box plots that lend themselves to the structure of statistical analysis.

Sessions 9:45 - 10:15 am

S12 New Teachers

Nancy Johnson

Room #226

New Teacher Drop in Discussion Group

All new teachers regardless of grade level experience the same challenges.
Share your positive and negative experiences during your first few years.

Sessions 9:45 - 10:45 am

S13 Grades K-5

Rob Nickerson

Room #228

Be Strategic: Tools for Multiplication and Division

Through strategies and visual models, teaching number and operations can make sense for elementary aged students. Participants will understand these tools provide the underlying reasoning for the “basic facts” in multiplication and beyond. Come learn practical ways to “use tools strategically” to develop the concept of multiplication and division.

Workshops 10:15 - 11:45 am

W4 **Grades 9-12**

Richard Larson

Room #227

MIT BLOSSOMS: Math by Critical Thinking and Real World Applications

MIT BLOSSOMS offers free interactive learning videos for high school math and science classes. Students sit in their regular seats with computers off. The in-class teacher performs a “Teaching Duet” with the video teacher. The BLOSSOMS video operates in short segments, 2 – 4 minutes, then after each segment the in-class teacher guides the class in highly interactive learning. Ideas: Go deep; critical thinking; excitement about math; show real world relevance.

W5 **Grades 9-12**

Barbara West

Room #148

Fun Functions: Making Functions Active and Interesting

Participants will experience several activities concerning functions. These will include using a human graph to explore functions, domain and range, and asymptotes. There will be an activity with function machines, a carousel, and a silent board game. We will end with a Function Treasure Hunt. The CCSSM Practices will be processed throughout.

Workshop 10:30 - 12:00 noon

W6 **Grades PK-2**

Jill Milton

Room #146

Essentials for Developing Early Numeracy (PreK-2)

During this session we will work with materials to help ensure that your early childhood classroom lessons are designed to provide students with opportunities for counting, building fluency with small numbers and developing the concepts of one-to-one correspondence. Through the use of five and ten frames, dot cards and conversation we can ensure that students are engaging in experiences that support the development of early numeracy concepts. We will discuss visual and spatial arrangements along with the latest buzz word in early childhood mathematics, subitizing. These fundamental skills lead the way to ensuring students are successful with composing and decomposing numbers to ten and beyond. Are you teaching PreK mathematicians? Or providing remediation to a struggling second grader? Either or both? Please join me for an information-packed session to learn practical strategies.

Sessions 10:45 - 11:45 am

S14 Grades 6-8

Margaret Kenney

Room #142

Mathematics and Art: A Viable Connection for All to Enjoy

This Math & Art connection is intended for all students; it does not call for creative or artistic skills. The math involved – number, its patterns and properties in combination with some geometry and symmetry relationships. We will sample three particular types of applications with handouts ready for student use - tiles and abstract art posters resulting from magic and latin squares, dreamcatchers that come from star polygons, and floor, wall, and material designs that display tessellations.

S15 Grades 9-12

Jim Matthews

Room #229

Before or After the AP Exam – An Incredible Problem Connecting Probability and Calculus

Looking for a few days of incredible mathematics for your students? In this session we will share an incredible problem with great mathematical connections you can use to finish off your AP calculus course on a high note. Of course the problem can be used at other times too. You need to see this to believe it.

S16 Grades 6-8

Shawn Towle

Room #226

Engaging Students in the Math Practices with FREE Technology from NCTM

Technology affords unique opportunities for exploration and discovery and fosters the development of greater in-depth understanding of mathematics. NCTM has free, powerful tools and resources available. Come explore resources from NCTM's Illuminations and Core Math Tools. Bring a laptop!

Sessions 11:00 am - 12:00 noon

S17 Grades 3-5

Kit Norris

Room #144

Number Lines: A Gift from Common Core

Common Core State Standards emphasize the number line as it connects components of our number system. The same number line serves as a valuable problem-solving tool for students with the additional benefit of making students' thinking visible. Come join us in this interactive session. Activities to use in your classroom will be featured.

S18 Grades 9-12

Leanna Russell

Room #140

Activities and Lessons to Model Algebraic Concepts

Participants in this session will come away with classroom activities to model standards in high school algebra. Activities include those with and without the need of technology.

Sessions 11:15 - 11:45 am

S19 New Teachers

Neelia Jackson

Room #228

New Teacher Drop in Discussion Group

All new teachers regardless of grade level experience the same challenges. Share your positive and negative experiences during your first few years.

Workshop 2:00 - 3:30 pm

W7 Grades K-3

Susie Schneider & Sarah Clark

Room #142

STEMming between the Classroom and Reality in Grades K-3

This session will introduce participants several successful STEM projects implemented over the past two years. We will show videos of the process as well as give recommendations for successfully running these valuable learning experiences. Then, together, all members of the group will begin developing a new project for the month of May, where all can then test it and compare information as a collaborative group - one of the elements of a STEM task.

Sessions 2:00 - 3:00 pm

S20 Grades 9-12

Joel Jacob

Room #144

**Applied Archaeology - Using Statistics to Understand the Archaeology of the Southwest;
Using Trigonometry to Triangulate and Map a Historic Site.**

Statistics students use the Peabody Museum's sherd collection to examine Alfred Kidder's accepted claims on how surround pueblos influenced the Pecos Pueblo. Trigonometry students use a surveyor's transit and some back of the envelope calculations to create a map of missing buildings.

S21 Grades 6-12

Christopher Scott

Room #228

Learning Progressions, Technology, and the Common Core

This presentation will show how teaching and learning in the classroom can be improved to increase student achievement by integrating learning progressions and the Common Core State Standards with technology and research-based, highly motivating software.

By using learning progressions and ability-appropriate standards in the CCSS strands, teachers saw an average of over 3 years of growth in their students during a 6-month period and an 8-point gain in the math NECAP score for the fall, 2012 testing. Through the incorporated use of technology with learning progressions, teachers saw instant results to how data, technology, and the Common Core State Standards can be used to improve classroom instruction and student learning.

S22 Grades 3-5

Lisa Mikus

Room #140

**Digging Deeper: Developing Learning Experiences
with Greater Cognitive Complexity That Kids Will Actually Enjoy!**

It seems as if elementary teachers are talking about the amount of curriculum we are required to cover. How do we fit it all in, make it relevant, and get students to invest in the process? By creating learning experiences that encourage students to think deeply and critically about content material, we are able to build lessons that are engaging, often thematic, incorporating multiple curricular areas, and interest students authentically, generating student investment. In this workshop we will look at examples of lessons and projects, and talk about how looking at our curriculum through a lens of cognitive complexity we can support depth of thinking and student learning.

S23 Grades 9-12

Cara Goldberg

Room #229

Math: Out of the Classroom, Into the World!

Learn how to use activities, projects, and field trips to bring secondary mathematics content into the "real world". Activities will include "Quadrant Quests" which can be used as a springboard for classroom discussions on connecting multiple representations of mathematical ideas. Turn your students into marketing gurus through the calculus optimization of a soda can. Field trips to a local museum or around the neighborhood will highlight the mathematics in their own community.

S24 Grades 6-8

Kathy Draper

Room #226

Making Connections Is the Key to Activities That Have Staying Power

It isn't new stuff to learn - it is the same relationships in a new setting. What students learned in elementary school comes back in an algebraic setting. Remembering is easier when the material makes sense!

S25 Grades 6-8

Nancy Johnson

Room #146

Problem Based Learning and the Mathematical Practices

The Common Core Standards for Mathematical Practice require that students make sense of problems and persevere in solving them, reason abstractly and quantitatively, model with mathematics, use appropriate

tools strategically, critique the reasoning of others, and look for and make use of structure. This workshop will focus on lessons designed to bring problem based learning into your classroom, enhanced by TI-Nspire technology and the Navigator system. These lessons will give your students deep understanding of the mathematics content and provide you with standards based lessons with formative assessment and rubrics to use in your classroom.

12:15 – 1:45 p.m. Lunch and Keynote Address

Anne Marie Condike

***Mathematics Professional
Development Coordinator***

Massachusetts Department of
Elementary and Secondary Education

***Getting Ready for the PARCC Assessment:
Implications for Curriculum and Instruction***



NATIONAL COUNCIL OF
TEACHERS OF MATHEMATICS

THE NATION'S PREMIER MATH EDUCATION EVENT

2015 NCTM Annual Meeting & Exposition

Save the Date

April 15–18, 2015

Boston Convention
& Exhibition Center **Boston, MA**

MARK YOUR CALENDAR

NCTM's Annual Meeting & Exposition brings together the most influential leaders and accomplished practitioners in mathematics education for three-and-half days of high-quality professional development that you can't afford to miss.

Conference sessions will focus on the latest trends, technologies, and topics facing the profession, and with access to more than 700 sessions, you will leave this conference with the information, strategies, and tools that you can immediately use to improve the quality of education for students in the classroom.

Conference topics addressed will include the following*:

- Assessing the Common Core State Standards for Mathematics
- Problems Worth Solving
- Supporting Students as Learners
- Supporting Teachers as Learners
- Integrating Mathematics with Other Disciplines

WHO SHOULD ATTEND?

- Pre-K–12 teachers
- Math teacher educators
- New and soon-to-be teachers
- Math coaches and specialists
- Math researchers
- School and district administrators

Plan ahead to attend the 2015 NCTM Annual Meeting & Exposition.

Learn more at www.nctm.org/boston and follow us on     

*Topics subject to change.

Conference Registration Fees

ATMIM conferences are for ATMIM members only. Conference rates listed below are member rates. Non-members are required to join ATMIM at the appropriate level.

Individual rate = \$60

Early Bird (prior to March 1) = \$50

Student Rate = \$10

Fully Retired Rate = \$40

1st, 2nd or 3rd year teacher = Free

ATMIM Membership for 1 year:

Individual = \$20

Student = \$5

Retired = \$10

First Year Teacher = \$5

Elementary Building Membership = \$25

Register at
www.atmim.net

Area Hotels

*Attendees who need overnight accommodations
may use the following list of area hotels*

Courtyard by Marriott Boston/Milford

10 Fortune Boulevard
Milford, MA 01757
(866) 576-5620
(distance = 3.5 mi)

Residence Inn Boston/Franklin

4 Forge Parkway
Franklin, MA 02038
(508) 541-8188
(distance = 7.6 mi)

Holiday Inn Express Boston/Milford

50 Fortune Boulevard
Milford, MA 01757
(508) 634-1054
(distance = 3.4 mi)

Comfort Inn - Milford

3 Fortune Boulevard
Milford, MA 01757
(508) 634-2499
(distance = 3.3 mi)

Doubletree Milford

11 Beaver Street
Milford, MA 01757
(508) 478-7010
(distance = 3.4 mi)

Fairfield Inn & Suites Boston/Milford

1 Fortune Boulevard
Milford, MA 01757
(508) 478-0900
(distance = 3.2mi)