

# 2017 ATOMIC Annual Meeting and Conference

## Program:

Below you will find descriptions of the **sixty** wonderful workshops and sessions you can choose to fill your day with meaningful professional development.

**There is no on-site registration - all must be pre-registered.**

ATOMIC Annual Meeting & Conference Schedule					
Registration Opens - Visit Exhibitors Continental Breakfast				7:00 - 7:50	
Annual Meeting & Awards Presentations				8:00 - 8:50	
Keynote Address - <b>Cathy Seeley</b> NCTM Past President and Author				8:50 - 9:50	
A	10:00 - 11:00	Workshop	or	10:00 - 10:45	Session
B	11:15 - 12:15	Workshop	or	11:15 - 12:00	Session
C	12:30 - 1:30	Workshop or Lunch*	or	12:30 - 1:15	Session or Lunch*
D	1:45 - 2:45	Workshop or Lunch*	or	1:45 - 2:30	Session or Lunch*
E	3:00 - 4:00	Workshop	or	3:00 - 3:45	Session
*Lunch will be served from 12:30 - 2:30*					



## Time Slot A

### Workshops: 10:00 – 11:00

<b>A1</b>	<b>GENERAL</b>
<b>Taking a Look at Upside Down Classrooms</b>	
Let's look together at classrooms across the grades that show how student conversation can lead to learning. We'll use videos of real teachers and students as a basis for reflecting on what shifts can be made in the classroom to help every one of your students become a mathematical thinker and problem solver.	
<b>Cathy Seeley, NCTM Past President and Author</b>	
<b>A2</b>	<b>Elementary</b>
<b>Let's Give Them Some Math to Talk About</b>	
Our students would talk in math, but they weren't listening to each other. They struggled to put their own reasoning on paper, and struggled even more when critiquing someone else's work. Last year, we set out to change our instructional practice to increase students' skills in constructing viable arguments and critiquing the reasoning of others. Participants in this workshop will engage in the rich tasks we used to infuse constructing and critiquing into every math lesson. You will hear from our students about the difference this work made in their understanding of math concepts and their attitude toward math learning. You will walk away with quick, effective ideas for engaging all your students in Math Practice 3.	

**Joanna Vastola, *Bristol Public Schools***  
**Scott Ruel, *Bristol Public Schools***  
**Heather Gendreau, *Bristol Public Schools***

**A3** **ELEMENTARY**  
**A Framework to Meet the Needs of All Learners in Your Classroom: A Focus on Big Ideas, Strategies, and Representations**

Participants will engage in tasks, analyze student work within grades K-5 and identify evidence of the mathematical big ideas and representations to determine entry points to build and further develop individual student understandings on a developmental continuum. Participants will apply the implications of this developmental continuum to diverse learners within their classrooms.

**Walter Wakeman, *Fairfield Public Schools***  
**Kerry Abramson, *Fairfield Public Schools***

**A4** **ELEM/MIDDLE**  
**Increasing Number Sense in Grades 1 - 8 Using Number Talks**

Requiring students to think flexibly about numbers is an important aspect of number sense. Number talks are a regular practice that requires students to solve computational problems in their heads and share their ideas. These are a great way to not only develop number sense but it also develops a classroom environment that encourages conceptual understanding of computation, precise language, mathematical justifications, and critiquing other's ideas in a safe and encouraging environment. The content of these talks can range from basic addition to algebra.

**Scott Kapralos, *CREC***  
**Cristina Frenkel, *CREC***  
**Rachel Rundstrom, *CREC***

**A5** **MIDDLE SCHOOL**  
**Using Ozobots to Engage Students in STEM Learning**

Teachers will learn how these mini-robots can be easily used to develop high-interest STEM activities for middle school students. Participants will have an opportunity to try out the Ozobots and learn the user-friendly system of coding that requires only 4 markers and a sheet of paper. A multi-concept project will be shared which teachers can take home to use in their own classrooms as is or in a modified form if desired.

**Amy Faitsch, *Madison Public Schools***  
**Melissa Arms, *Madison Public Schools***

**A6** **MIDDLE / HIGH**  
**Math Technology Showcase!**

Put the focus on students' lasting learning by giving them opportunities to use today's technology tools in math class. Online programs such as Geogebra and Desmos are rich environments for exploration, and handheld graphing calculators are more powerful than ever. These dynamic and engaging tools can help your students think and reason about math and develop enduring understanding. If you need a hand getting started with these exciting platforms and the online community known as the MTBoS, come to our Technology Showcase to hear from math tech aficionados right here in Connecticut.

**Karen Campe, *T3-Teachers Teaching with Tech***  
**Tim Brezinski, *CCSU***  
**Suzanne von Oy, *Newtown Public Schools***

**A7** **MIDDLE / HIGH**  
**Meeting the Needs of All Learners in Our Math Classrooms**

In this workshop participants will work with a Special Education teacher and a Math teacher who will share their strategies for:

- Reaching the high achievers
- Supporting the struggling student
- Creating access for the EL student
- Engaging everyone in a diverse class.

By the end of the workshop, you will have a solid set of strategies that you can use in your classroom to meet the needs of all your learners. Feel free to bring a lesson that you would like to work on adapting to include appropriate strategies.

**Will Lathrop, *Cheshire Public Schools***  
**Deb Bottaro, *Cheshire Public Schools***

**A8** **HIGH SCHOOL**

**Make Statistics Class More Active and Understandable**

Ready to use activities for Statistics classes from college prep to AP to UCONN/ECE. Participants will take part in activities to make the concepts understandable and applicable for students. Participants will leave with many activities that have successfully been used in classrooms in addition to games that can be used for review.

**Gabrielle Aitchison, Canton Public Schools**

**Nicole Cowles, Regional School District 14**

**Sessions: 10:00 – 10:45**

<p><b>A9</b>  <b>Taking the Numbers Out of Math</b>            This workshop will explore our own work with numberless work problems as well as the work Brian Bushart has posted on the topic. We will discuss how taking the numbers out promotes a focus on understanding, discourse and the relationships between numbers. If you are looking for a way to get students to stop and think or have ever thought "they just take the numbers and multiply, divide, add, subtract with them", then this workshop is for you!</p> <p><b>Alicia Atterrato, Plainville Public Schools</b>  <b>Phil Sanders, Plainville Public Schools</b></p>	<p><b>ELEMENTARY</b></p>
<p><b>A10</b>  <b>Family Math Night-From Start to Finish</b>            These presenters will share their experience with a successful K-5 math night event. Come learn about and brainstorm ways to bring your school community together to celebrate and experience mathematics learning in fun and innovative ways! Topics will include the use of gross-motor, hands-on, literature-based, and personalized learning stations that encourage collaboration and emphasize the mathematical process.</p> <p><b>Lori Purcaro, Ellington Public Schools</b>  <b>Leslie Mancuso, Ellington Public Schools</b></p>	<p><b>ELEMENTARY</b></p>
<p><b>A11</b>  <b>Guiding Instruction Through the Use of Interim Assessment Blocks</b>            Interim Assessment Blocks are a great tool to help expose students to SBAC style questions and computerized testing. However, the greater benefit is the data we can get from these assessment blocks and how we can use that information to have students set goals from themselves and guide our instruction. In this session, we will show how to administer an IAB, where to find the data from the assessment, and how we used the data to goal set with our students and streamline our curriculum. Documents will be shared including goal setting sheets, test error analysis forms, and guides for looking at student work. There will also be a short video of our students as they discuss IAB results and talk about the best goals to set for themselves based on their scores.</p> <p><b>Karyn Deptula, Coventry Public Schools</b>  <b>Elizabeth Carroll, Coventry Public Schools</b></p>	<p><b>MIDDLE / HIGH</b></p>
<p><b>A12</b>  <b>Just Add Math – STEAM Projects as Part of the Math Curriculum</b>            STEAM projects are regularly talked about at faculty meetings, and schools have been big proponents of STEAM activities. However, with all the requirements put on teachers to incorporate specific content, as well as what seems like endless testing, it is often difficult to incorporate these projects into our already packed school year. In this presentation, we will go over some sample STEAM projects that have been incorporated into math classes at different levels, from Middle School through High School. Also, attendees will have a chance to develop basic STEAM projects based on different Common Core Math Standards and Practices.</p> <p><b>David Cassenti, CATS Educational Associates</b></p>	<p><b>MIDDLE / HIGH</b></p>

**Time Slot B****Workshops: 11:15 – 12:15**

<p><b>B13</b>  <b>How Aligned is the Instruction?</b>            This guide provides concrete examples of what the Core Actions for implementing the Common Core State Standards (CCSS) for Mathematics in elementary to high school look like in daily planning and practice. If you are observing math instruction, you need this tool. It is designed as a developmental tool for teachers and those who support teachers and can be used to observe a lesson</p>	<p><b>GENERAL</b></p>
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and provide feedback or to guide lesson planning and reflection.

**Note: Participants will need a computer device and headphones to watch a 3-5-minute video.**

**Tamara Gloster, CREC**

**B14** **ELEMENTARY**

**Improving Instruction with the Instructional Planning Guide from Achieve the Core**

Too often, math educators attempt to reflect and grow using rubrics that are too general and do not focus on the specific pedagogy needed to lead a Common Core aligned math lesson. In this workshop participants will be introduced to the Instructional Practice Guide, (IPG) developed by Achieve the Core. This tool is designed to help teachers and coaches build understanding and experience with Common Core aligned instruction. IPG is based on three shifts in instruction: focus, coherence and rigor. Participants will learn how to use the tool to gain a better understanding of how to identify and apply the shifts to their teaching.

**Carol Marsiglio, Groton Public Schools**

**Bob Janes, Groton Public Schools**

**B15** **ELEMENTARY**

**Go Beyond the Answer: Reasoning Through Mathematical Writing**

A math answer is worth 1,000 (or fewer) words! Even our youngest student mathematicians can reason and communicate their ideas in writing. Come learn how this was done in dozens of classrooms across several states through Project M2, an endeavor that was funded by the National Science Foundation. Participate in engaging activities that focus on key number, geometry, and measurement concepts all the while learning how to prompt and nurture writing that positions students to reason mathematically. We will begin with an intriguing problem to see how much more deeply students think mathematically beyond the answer. Then we will engage in several activities that target big ideas related to number sense, shapes, and measurement concepts while learning about ways to prompt for informative/explanatory and argumentative writing.

**Tutita Casa, UConn**

**B16** **ELEM / MIDDLE**

**Equity and Mathematics Education. Data Driven Culture and Growth Mindset as an Antidote to the Status Quo.**

If Mathematics is a Universal Language, why is equity in mathematics education so hard to achieve? The data doesn't lie: we have a long way to go before we can say our mathematics practices are indeed 'best' for all students. In fact, common trends can propagate the very gap we seek to close. This professional conversation will explore how the proper implementation of a growth mindset and the cultivation of a data driven culture can recalibrate the mathematics block to support All Learners while maintaining high standards, equal academic opportunity, and a strong growth culture.

**Tyrone Holmes, Curriculum Associates**

**B17** **ELEM / MIDDLE**

**A Closer Look at the Interim Assessment Blocks Using Google Applications**

You will learn how the New Haven Public Schools utilizes Google Forms and Google Sheets to develop a systematic data collection format for the Smarter Balanced Interim Assessment Blocks. Assisting teachers in creating target groups of students for focused instruction. In this interactive workshop you will work in a live Google account to analyze and create common formative assessments, student groups, and areas for targeted instruction. Please bring a laptop to this presentation.

**Lisa Pietrisomone, New Haven Public Schools**

**Linda Whiteley-Foster, New Haven Public Schools**

**B18** **MIDDLE SCHOOL**

**Strategies for Writing Equations to Solve Word Problems**

Participants will experience three strategies for solving equations. They will learn how to "tweak" graphic organizers (tables) as an effective tool for solving word problems. The next step is to write algebraic equations from the tables. Finally, they will use manipulatives to solve these equations. There will be a variety of word problems to practice these strategies.

**Mark Jones, Mansfield Public Schools**

**B19** **MIDDLE / HIGH**

**And the Children Shall Lead --- Creating a Student-Centered Classroom**

As a teacher you certainly want your students to learn the material; but keep in mind, the vast majority of students will use most of the math skills they acquire for a relatively short time. Consequently, as educators, we should infuse into our lessons skills that students will use for the rest of their lives.

*Rinaldi's Routine* is a classroom management strategy that incorporates several life skills. Students learn how to stay on task, become autonomous learners, collaborate on problem solving, improve interpersonal relationships, and develop leadership abilities. This classroom-tested procedure which was fine-tuned over many years, transforms the traditional teacher-centered classroom into one that is more *student-centered*. Workshop participants will be led step-by-step through the implementation of this strategy.

**Nicholas Rinaldi, Univ. of New Haven (retired)**

**B20**

**MIDDLE / HIGH**

**There Is No I in Team: Using Groups to Promote Communication and Collaboration in Math Class**

Have you ever had a group that was individuals who happened to be at the same table? Students benefit from collaboration. However, sitting together does not guarantee effective mathematical discourse. Students need skills and structures to confidently and respectfully communicate and critique mathematical thinking. This session will share easy and fun strategies that encourage students to talk, write, and share ideas both to the whole class and within small groups. We will work through a series of problems designed to encourage meaningful discourse while using strategies that build independence and depth of understanding.

**Jocelyn Dunnack, Mansfield Public Schools**

**Sessions: 11:15 – 12:00**

**B21**

**ELEMENTARY**

**Use of Student Questioning to Deepen Mathematical Learning**

"The single most important principle for improving the teaching of mathematics is to allow the subject of mathematics to be problematic for students " (Teaching Student-Centered Mathematics, Heibert et al, 1996). The focus of this workshop will be to guide teachers to develop strategies that will allow them to ask deeper questions of students and to encourage students to ask deeper questions of each other. Through this questioning, students will develop a deeper understanding of mathematics. Teachers will learn how to help their students work through productive struggle to deepen their understanding of math concepts.

**Nancy Bassilakis, South Windsor Public Schools**

**Erin Boberek, South Windsor Public Schools**

**Vincent Federici, South Windsor Public Schools**

**B22**

**ELEMENTARY**

**Are You Down with the DOK?**

Hey, we get it...Today's teachers are stretched beyond the number of hours in a day. In this presentation, we tackle how to manage the everyday math instruction without taking an hour to prepare for the day. Using Karin Hess' Depth of Knowledge work, we dig deeper into how to get your math students' conceptual understanding at a high level. We will demonstrate how to shift DOKs through task selection, worksheet adaptation, questioning and discourse. This presentation goes beyond the performance task and rallies around the everyday work you do in the classroom. Finally, we will link the correlation of Depth of Knowledge to the Mathematical Practices we all are integrating into our math instruction.

**Heather Rigatti, Regional School District 17**

**Bryan Kerachsky, Regional School District 17**

**B23**

**MIDDLE SCHOOL**

**Math Workshop in the Middle School**

Based on the book "Minds on Mathematics: Using Math Workshop to Develop Deep Understanding in Grades 4-8," this presentation will show how to apply the math workshop to the middle school curriculum. Teachers will learn about the elements of the math workshop, how to use a "math grapple" to start the lesson and differentiate the learning activities for the different levels of students, as well as plan for different learning activities to use during the workshop. Teachers will leave the presentation with an overview of the math workshop and how it applies to the middle level, the skills necessary to plan and implement a math workshop lesson, and the knowledge of different learning activities to use during the workshop.

**Jonathan Bruneau, Newington Public Schools**

**B24**

**GENERAL**

**Supporting ELs with Explaining Their Mathematical Thinking**

Some say that math is the same in every language, but we math teachers know that today's secondary math class requires more than numbers: significant proficiency in writing and speaking are needed to master Common Core State Standards in mathematics. With a growing number of English Learners in Connecticut schools, teachers must strategically design ways for students with limited English proficiency to explain their mathematical thinking so that they, too, can master these standards. This workshop will model the thought process for developing response frames for open-ended math questions through generating specific sentence starters, word banks and answer choices that scaffold language but maintain mathematical rigor.

Rachel Wojciehowski, *Danbury Public Schools*

## Time Slot C or Lunch

Workshops: 12:30 – 1:30

<p><b>C25</b>  <b>Facilitating Meaningful Mathematical Discourse</b>            A teacher's facilitation of meaningful mathematical discourse is a powerful tool to make mathematics reasonable to students, move their thinking forward, and help reach other classroom goals. This presentation provides resources for teachers trying to build a discourse community and addresses challenges faced when facilitating classroom discourse.</p> <p><b>Megan Staples, UConn</b>  <b>Sherryl King, Ellington Public Schools</b></p>	<p><b>GENERAL</b></p>
<p><b>C26</b>  <b>Gamification of the Math Classroom Using Grid Games</b>            Gamification of the math class shows teachers how they can easily (and inexpensively) use grid game structures to support the development of math skills and concepts across domains, while promoting discourse, collaboration and engagement. If you would like to learn how to move beyond the worksheet and still help your students become more proficient and fluency, while being engaged in math, then learn how to gamify your classroom.</p> <p><b>Christine King, C King Education</b></p>	<p><b>ELEMENTARY</b></p>
<p><b>C27</b>  <b>Create Innovative Math Lesson Plans Based on Popular Children's Literature</b>            Creating bridges between English language arts and the concepts and computational skills we teach in elementary mathematics leads to lessons that promote math skills and engage children. In this workshop, tables will be supplied with popular children's books and outlines used for completing lesson plans. After session leaders provide an introduction to creating engaging lesson plans based on literature and examine specific examples of lessons, each table will form into smaller groups to create their own lesson plans based on a selected story or its characters and then share their plans.</p> <p><b>MW Penn, MathWord Press</b></p>	<p><b>ELEM / MIDDLE</b></p>
<p><b>C28</b>  <b>The M in STEM: Developing Young Mathematical Minds</b>            STEM classrooms offer a curriculum that emphasizes questioning and inquiry, creative and critical thinking and give students frequent opportunities to apply engineering design and problem solving. The M in STEM comes alive when students consistently experience hands-on-learning that allow them to engage, explore, explain, elaborate and evaluate! Join us to learn more about the M in STEM.</p> <p><b>Danielle Legnard, Bethel Public Schools</b>  <b>Susan Austin, Groton Public Schools</b></p>	<p><b>ELEM / MIDDLE</b></p>
<p><b>C29</b>  <b>Building Math Rigor: Focus on Math Reasoning</b>            Need to improve the math reasoning in your class? Critiquing the reasoning of others and constructing viable arguments, Math Practice 3, are critical areas of need in our students. Grade level curricula needs to include explicit instruction centered on math reasoning. Students need to see exemplary math reasoning responses. This workshop will provide instructional activities that will move your students towards improving the quality of their math reasoning. All activities are classroom tested! See them today – teach them tomorrow!</p> <p><b>Peggy Neal, CREC</b></p>	<p><b>MIDDLE SCHOOL</b></p>
<p><b>C30</b>  <b>Re-Examining Grading Policies and Practices</b>            Grading policies should meet two key criteria: (1) to be perceived as fair and equitable and (2) to have a positive impact on student learning. In this presentation, the President of the Connecticut Council of Leaders of Mathematics will share some policies and practices that meet these criteria.</p>	<p><b>MIDDLE / HIGH</b></p>

**John Keogh, CCLM**

**C31**

**MIDDLE / HIGH**

**New Way to Model**

Want to try a new way to model mathematics in your classroom? Then this session is for you. This approach focuses on Mathematical Practice Standard 4 and Crossing Cutting Concepts with NGSS to have the students to demonstrate their understanding to you through models. Also, this approach to modeling helps to create a collaborative and positive environment in your classroom.

**Amanda Peterson, Danbury Public Schools**

**C32**

**HIGH SCHOOL**

**Exotic Quadrilaterals**

We are all familiar with special quadrilaterals such as parallelograms, trapezoids, rectangles and squares. But the "family" of quadrilaterals extends far beyond these. In this workshop, we will explore more exotic figures such as cyclic kites, orthodiagonal trapezoids, and bicentric quadrilaterals and figure out where each of these fits in the hierarchy. If you have GeoGebra on your laptop, please bring it with you.

**Tim Craine, CCSU**

**Sessions: 12:30 – 1:15**

**C33**

**GENERAL**

**An Analysis on the Implementation of the Interactive Notebook and its Utilization Among the Student Body**

Proactive organizational strategies in the learning environment have provided increased achievement in classrooms. Through implementing note taking strategies and other organizational methods in classrooms, students were studied on how change in organizational structure influenced their understanding of mathematics.

**Olivia Ferdon, University of New Hampshire**

**C34**

**ELEMENTARY**

**Games and Number Talks to Promote Number Sense in Grades K-2**

Have you ever used a Rekenrek in your classroom? How does it help children to develop number sense? Would you like your students to become more fluent and flexible in their use of number? Come to this session to learn more about how to develop number sense in your students. We will learn about engaging strategies that all students can adopt to strengthen their confidence with math. We can do this through using the Rekenrek, ten frames, dot cards, quick images, games, and number talks!

**Cindy Booker, Monroe Public Schools**

**Holly Cyr, Monroe Public Schools**

**C35**

**ELEMENTARY**

**Kill the Drill**

Let's kill the drill! Students learn best when engaged in high interest hands on lessons, not completing test questions after test question. We will work together to evaluate current SBA questions and the related math standards to formulate hands on lessons in which students build their own understanding of math concepts. You will take away lessons that you can implement in your class the next day.

**Shawnee Scaniffe, New Haven Public Schools**

**Rolanda Booker, New Haven Public Schools**

**Lorrie Quirk, New Haven Public Schools**

**C36**

**MIDDLE / HIGH**

**Calculator Policy for PSAT, SAT and AP: Facts and Misconceptions (that can undermine Equity)**

Understanding the Calculator Policy for high stakes exams can inform teaching/learning practices and avoid the communication of misinformation to students, parents and other stakeholders. This session will present the facts and misconceptions for each College Board high stakes exam applicable to Connecticut students. Tips and recommendations for educators will be shared. Participants will receive hard copy and electronic copy of each Policy.

**James Donatelli, Texas Instruments**

**Time Slot D or Lunch**

**Workshops: 1:45 – 2:45**

<p><b>D37</b>  <b>Engaging Students with Videos in the Math Classroom</b>  Participants will learn different uses for videos in the math classroom beyond Khan Academy. The first 20 minutes will focus on how teachers can create their own videos as homework assignments and include formative assessments. The second 20 minutes will focus on how students can make their own videos as assessments of discourse. The remaining time will allow participants to create a video or an assignment they can use with their students. Participants should bring their own electronic devices.</p> <p><b>George Mitesser, Regional School District 17</b></p>	<p><b>GENERAL</b></p>
<p><b>D38</b>  <b>Let's Get into Shapes!</b>  Geometry abounds in our world. It is referenced as a critical area in the Connecticut Mathematics Common Core State Standards for Grades K-4. Learning about geometry not only helps students make sense of their environment, but also is useful in supporting other areas of mathematics, such as number, measurement and algebra. Come explore creative, hands-on activities and games that will engage students in reasoning about shapes and their attributes and foster a deeper understanding of how to classify shapes by their properties. Discover how the big ideas of geometry are developed through the elementary grades and how readily these activities can be put into practice in your own classroom.</p> <p><b>Ann Marie Spinelli, CCSU</b></p>	<p><b>ELEMENTARY</b></p>
<p><b>D39</b>  <b>Leveling the Playing Field for Black and Latino Elementary Students</b>  What is Social Justice Mathematics? An alternative solution defining how implicit biases can shape how we teach and engage students in mathematics. Participants will experience how students feel during a "typical" math block. Examining how people use math to solve difficult problems everyday. Integrating CCSS as students find ways to solve social justice issues that they feel are important to them.</p> <p><b>Michelle McKnight, Manchester Public Schools</b></p>	<p><b>ELEMENTARY</b></p>
<p><b>D40</b>  <b>Instructional Strategies and Practices to Strengthen Problem Solving</b>  Looking to improve how your students problem solve? Learn how one school district has helped their students transform from being reporters of answers to understanders and communicators of mathematics when problem solving for word problems and other mathematical situations. Leave with ideas for practices and instructional strategies that they have implemented that you can bring back to your classroom, school, and/or district.</p> <p><b>Robin Moore, Regional School District 6</b>  <b>Jean Leonard, Regional School District 6</b>  <b>Carrie Maillet, Regional School District 6</b>  <b>Tina Maritano, Regional School District 6</b></p>	<p><b>ELEM / MIDDLE</b></p>
<p><b>D41</b>  <b>Mathematical Modeling and Student Discourse in the Secondary Classroom</b>  "Mathematical modeling," found in the CCSS, is a term that is often mistaken as a tool for teachers. This session will explore how the process of mathematical modeling can be used in the secondary classroom to promote student discourse and mathematical reasoning, as well as help students to understand how mathematics is really part of our everyday lives.</p> <p><b>Edward DePeau, CCSU</b></p>	<p><b>MIDDLE / HIGH</b></p>
<p><b>D42</b>  <b>Engaging Students with Manipulatives and Interactive Technology</b>  The presenters will share classroom-tested activities highlighting Algebra and Geometry concepts using hands-on and minds-on materials. The hands-on activities will include a variety of manipulatives, with connections to virtual manipulatives. The activities will reinforce the CCSSM for grades 6-8 and 9-12.</p> <p><b>Heather Sauer, Branford Public Schools</b>  <b>Maria Diamantis, SCSU</b></p>	<p><b>MIDDLE / HIGH</b></p>
<p><b>D43</b>  <b>Arguing it Out - Exploring a Model that Supports the Development of Students' Argumentative Abilities</b>  In this workshop, we will share our developed Investment, Analysis, Check-in (IAC) Model - that can be used to engaging students in argument analysis as well as in the production of their own written arguments. We will engage participants in a flexible learning experience using the model, then debrief our experience and discuss the variations of how this can be implemented in the</p>	<p><b>MIDDLE / HIGH</b></p>

classroom. In addition, we will share an exemplar lesson and our research that supports student argumentative growth when using the IAC model.

**Maria Enrique, UConn**

**Justin Kaeser, UConn**

**D44**

**HIGH SCHOOL**

**Using GeoGebra to Discover, Remediate, Differentiate, & Assess**

This workshop is open to ALL mathematics teachers. No previous GeoGebra experience is necessary. In this session, participants will create a free GeoGebra account and have opportunities to actively engage with several ready-to-use sample applets that clearly, dynamically, and powerfully illustrate how GeoGebra can serve as a platform for discovery learning, a resource for meaningful remediation, a tool to differentiate instruction, and a source of ongoing formative assessment. Each participant will also have an opportunity to create and upload an applet to his/her GeoGebra Materials page.

**Tim Brezinski, CCSU**

**Sessions: 1:45 – 2:30**

**D45**

**GENERAL**

**Mobile Learning in Math Classrooms**

This session will present the SAMR Framework, to assess and evaluate technology used in math classes. Following this overview, participants will be provided information on the International Society for Technology (ISTE) in Education Standards. Finally, a review of the "Pad"agogy Wheel V4.0 will be presented as a resource for tech in math classes.

**Anne Pember, ACES**

**D46**

**ELEMENTARY**

**Early Numeracy: Exploring the Counting Progression and Building Number Sense in our Youngest Learners**

This workshop will explore the counting progression and the relationships that help young children develop number sense: subitizing, part-whole relationships, and benchmarks of five and ten. Participants will have the opportunity to work with rekenreks, ten frames, and number bonds. Participants will also learn how the number concepts developed in kindergarten and first grade impact the work of second grade. A variety of activities will be shared that can be brought right back to the classroom!

**Kimberley Cody, Stratford Public Schools**

**Judy Casteneda, Stratford Public Schools**

**Jackie Giordano, Stratford Public Schools**

**D47**

**MIDDLE SCHOOL**

**Maximizing Critical Thinking with Volume**

Looking to promote critical thinking while engaging students in geometry? Compete in the Cake Contest! Participants will work in groups to complete a performance task. Part 1... design a cake to meet a set of given conditions. Part 2... create a virtual model of the cake using TinkerCAD. Bring a laptop if you have one and come show off your skills! Ready-to-use resources will be available.

**Colleen Haberern, Watertown Public Schools**

**D48**

**MIDDLE / HIGH**

**Full STEAM Ahead**

Join this hands-on session to learn how physical computing (the "E") can enhance your mathematics and science classrooms as well as provide connections to the "A" in STEAM. Engage your students with the new TI-Innovator Hub along with TI-Nspire CX and/or TI-84 PLUS CE technology. Ready-to-use handouts will be available. Come join the fun! You can bring your own device or one will be provided for you.

**Ellen Browne, Pomfret School**

**Time Slot E**

**Workshops: 3:00 – 4:00**

**E49**

**ELEMENTARY**

**Bonds.... Number Bonds Through the Years**

Number Bonds are a great math strategy/tool to help students understand a variety of operations with number. We will show participants how they can use number bonds with their students for addition, subtraction, multiplication and division with whole

numbers, decimals, fractions and integers. Participants will be actively engaged and will practice using the strategy during the presentation.

**Michelle Pollack, Pine Bush (NY) Public Schools**

**John Tobin, Pine Bush (NY) Public Schools**

**E50 ELEMENTARY**

**Using Numberless Problems in the Classroom to Support Mathematical Practices 1 & 2**

When solving problems, do your students jump right to the numbers without thinking about what the problem means and is asking? Do they get stuck when there are too many numbers or the numbers are large? Numberless problems can help students slow down and focus on the context of the problem. During this session, teachers will learn about how using numberless problems in their math class can help students make sense of problems, reason abstractly and quantitatively, and have the motivation to persevere. They will learn the steps of this effective strategy and be able to utilize it in their own classrooms immediately.

**Rebecca Sullivan, Bolton Public Schools**

**E51 ELEM / MIDDLE**

**Changing How We View and Assess Fact Fluency**

Come learn about our journey to change how teachers view and assess Fact Fluency. We will share our district's Math Fact Position Statement based on current research. We will share instructional strategies and formative assessment ideas that will help drive fact fluency instruction, without the pressure of time. You will learn ideas on incorporating practice with strategies into your classroom, school, or district.

**Katarzyna Maleszewska-Suarez, Wethersfield Public Schools**

**Sarah Johnson, Wethersfield Public Schools**

**Anne Molloy, Wethersfield Public Schools**

**E52 ELEM / MIDDLE**

**Quiet Too Long - How to Amplify Student Voice**

Join a conversation on the Foundations of Discourse. What research tells us about how students enter the discussion – how to promote, create culture and routines around amplifying student voice. This workshop will be interactive, lively and fun. You'll walk away with increased knowledge and confidence to effect change. It will use the research and work of Akihiko Takahashi and the Japanese lesson study as well as Jo Boaler, Susan Jo Russell and Deborah Schifter.

**Kurt Whited, Pearson Education**

**E53 ELEM / MIDDLE**

**The Four Operations of Arithmetic with Rational Numbers in the Enactive Mode**

Fractions are tough! Just about everyone agrees. But, this workshop will remove 98.6 percent of all the stress for both teachers and students. Come to this session, have fun and learn a lot!

**Phillip Halloran, CCSU**

**E54 MIDDLE SCHOOL**

**Using a Workshop Model in a Middle School Math Classroom**

Participants will examine how using a workshop model in a grade 5-8 math classroom can support the Connecticut Core content and process standards, while meeting the needs of all learners. We will address different structures, routines and rituals used to initiate and sustain this type of differentiated instruction.

**Sue Renehan, CREC**

**E55 MIDDLE / HIGH**

**"My kids can't do that!"**

Are gaps in students' prior knowledge preventing you from delivering instruction as planned? Do you struggle to fill gaps in your students' learning while maintaining the pace demanded of your grade-level math curriculum? This session will present a proactive approach to predicting students' areas of weakness related to math content and effectively diagnosing misconceptions through the use of post-assessments. Through an interactive exploration of Student Achievement Partner's digital Coherence Map tool, participants will gain the confidence needed to lesson plan with prerequisite skills in mind.

**Adam Krupa, East Hartford Public Schools**

**Donna Busa,**

**E56 HIGH SCHOOL**

## "Talking" about Mathematics: Using an interactive notebook in Geometry, Algebra II, and Pre-calculus Classes

In this workshop, the facilitators will give an overview of what an interactive notebook is and how to use it in your classroom to help all students learn. Participants will then break into small groups by course and have the opportunity to research and share interactive notebook activities. Please bring with you a topic or two that you will be teaching in an upcoming lesson. Participants are also asked to bring their own laptop to explore these educational resources.

The goal by the end of the workshop is for you to have a lesson plan in place using these interactive notebook activities that you could bring to your classroom tomorrow.

**Terri Schulman, Cheshire Public Schools**  
**Elizebeth Figueiredo, Cheshire Public Schools**  
**Diane Maisto, Cheshire Public Schools)**

### Sessions: 3:00 – 3:45

**E57**

**GENERAL**

#### Using Data to Drive Instruction and Review

Do you know for sure if your students understood the lesson you taught yesterday? Wouldn't it be great to know before class starts today so you could adjust your lesson plans? Learn how to get and use the data instantly from anything you currently assign. Make your instruction more effective by knowing immediately what your students understand by using ASSISTments, a free, online tool developed at Worcester Polytechnic Institute.

**Andrew Burnett, WPI - ASSISTments**

**E58**

**ELEMENTARY**

#### The Intersection of Instructional Practices in Math and Literacy

Math and Literacy pedagogy are more alike than different. Good teaching is good teaching. The strategies used in the reading and writing workshop model, in conjunction with lesson study protocols, unite for good teaching and learning.

**Doreen Stohler, Hamden Public Schools**  
**Allison Wills, Hamden Public Schools**

**E59**

**MIDDLE / HIGH**

#### Leveraging Desmos in the Classroom

Desmos is an extremely powerful, free, intuitive online graphing calculator and classroom activity building interface. It enables students and teachers to engage with mathematics in ways never before possible. Students using Desmos can be found engrossed in activities, giving each other high fives, and getting downright excited about mathematics. In this session, join Suzanne von Oy, a Desmos Fellow, in exploring the power Desmos has to transform how students think about math.

**Suzanne von Oy, Newtown Public Schools**

**E60**

**MIDDLE / HIGH**

#### Smartphone Mayhem.... Using their Smart technology to YOUR Advantage

The use of smart technology and smartphones has taken over our current generation of students. You will learn about a few ways to use it in a productive way in the classroom. A few easy to use (free) apps can help engage students and make you appear "hip". Educreations, Show Me, Socrative, and Remind are a few apps that let you in to your students' technology world. You will get a step by step guide so you can jump in and use it in your class the next day!

**Sheila Reilly, Regional School District 17**

