



**Association of Mathematics
Teachers of New Jersey**



**Engaging and Motivating Activities to Address the New
State Standards**

AMTNJ's ANNUAL WINTER CONFERENCE
Wednesday, February 8, 2017 7:30 AM – 3:15 PM
CROWNE PLAZA, MONROE TOWNSHIP, NJ

7:30 - 8:15 Registration and Continental Breakfast			
8:15 - 9:15	First Round of Breakout Sessions	Level	Location
	<p>Designing Engaging Math Centers with the New Standards in Mind – Participants will learn how to create and implement engaging standards-based math centers as a form of assessment to drive instruction to deepen students' understanding of the New Jersey Student Learning Standards and Mathematical Practices.</p> <p>Presenters: Stephenie Tidwell, Jennifer Bordieri, Wanda Koch and Sarah Masio – Plainfield Public Schools</p>	PK – 5	Cranbury
	<p>Centers vs. Guided Groups - What's the Difference? – Centers and guided groups – both have a place in every mathematics classroom. However, they aren't the same thing. In this session, we'll discuss the similarities and differences between the two and offer suggestions of activities for each.</p> <p>Presenter: Linda Bortnick – East Brunswick Public Schools</p>	3 – 5	Nassau
	<p>Promoting Discussion of the NJSLS in the Math Classroom – Come learn strategies for stimulating math discourse in your classroom. Activities will be modeled to encourage student communication about the NJSLS.</p> <p>Presenters: Dana Collins – Flemington-Raritan School District & Kelly Bosworth – Madison Public Schools</p>	3 – 8	Brunswick
	<p>Student Created 3-Act Videos – We will explore and discuss several student designed 3-Act Videos. The students' efforts emulate the work of Dan Meyer. Learn how to have your students create their own.</p> <p>Presenter: Scott Fuchs – Kearny Schools</p>	6 – 8	Princeton
	<p>Algebra as An Experimental Science – The presentation discusses the use of graphing software as a tool to help students discover patterns in algebra and explains why this approach may be helpful for students with particular types of learning disabilities or other special needs.</p> <p>Presenter: Deborah Rebhuhn – The Center School</p>	6 – 12	Mercer
	<p>Absolute Essentials when Solving Absolute Value Inequalities – Knowing what to expect for your answer BEFORE solving a 1-variable absolute value inequality is absolutely essential. Participants will examine several absolute value inequalities and learn to predict how results will look when graphed on a number line. Having no expectation about the final result often leads to incorrect answers.</p> <p>Presenter: Thomas Bierman – New Road School of Somerset</p>	6 – 12	Forsgate

<p>Using Real Internet Data to Motivate Students in an Algebra Class – I will discuss activities using real Internet data that has helped engage my students in learning application problems in my Algebra classes. Topics range from Ratios and Proportions, Percent Change, Average Rate of Change, Linear Modeling, Exponential Modeling and Fitting Data to Algebraic Models.</p> <p>Presenter: Cathleen Zucco-Teveloff – Rider University</p>	6 – 12	Windsor
<p>Ensuring the Success of ELs in the Math Classroom – This session will show how modifications can be used to ensure the success of English Learners in high school mathematics classrooms. We will discuss general ESL modifications and how to apply them.</p> <p>Presenter: Amanda Lowry – Hunterdon Central Regional High School</p>	9 – 12	Middlesex
<p>PARCC Your Own Assessments – This workshop is intended for educators to want to explore the workings of edulastic.com. Teachers can create their own PARCC-like assessments. It will familiarize students with online assessments and increase student engagement while incorporating technology. Teachers will be able drive instruction based on data obtained by automatic grading.</p> <p>Presenter: Mary Strohmeyer – Valley Middle School</p>	General Interest	Kingston

9:25 - 10:25	Second Round of Breakout Sessions	Level	Location
	<p>Bar Modeling – the Singapore Math® Approach to Problem-Solving – Discover how students learn to use the Singapore Math® bar model in the primary grades and continue with it through the middle grades and beyond. Learn how the foundations that begin in kindergarten with number sense and number bonds develop into meaningful links between related numbers in the problem-solving process.</p> <p>Presenter: Christopher Coyne – Marshall Cavendish Education</p>	PK – 5	Middlesex
	<p>Let's Get This Party Started . . . With Fresh ideas – If you need more exploratory ways and activities to keep the deep and meaningful conversations alive in the classroom then you need to participate in this session. It will be an engaging one full of activities and ideas to use in the classroom immediately. A fresh new adventure for you and your class!</p> <p>Presenter: Amy Miele-Wilkerson – Franklin Township Schools</p>	3 – 8	Mercer
	<p>Using On-the-Spot Assessment to Engage Students and Drive Instruction – In this workshop, participants will learn how to easily and systematically assess students during a lesson and how to use the collected data to adjust instruction. Participants will also learn how to use in-the-moment assessment to support classroom management, increase student motivation, build relationships and rapport, and ease report card data collection and grading. This workshop includes three portions. The first portion focuses on an overview of formative assessment and its role and importance in the classroom, the second portion has participants review sample student work and classroom transcripts in order to analyze them for best practices, and the last portion has participants practice what they have learned by engaging in student-teacher role plays that model best practices around formative assessment. Lastly, teachers will have the opportunity to reflect on the work and consider implications for their own classrooms.</p> <p>Presenter: Emily Creveling – Freehold Township School District</p>	3 – 12	Brunswick
	<p>Meeting the Needs of Students with IEPs – This presentation will discuss methods for meeting the needs for students with IEPs from both a special education and general education perspective. We will provide methods for helping balance the co-teacher roles, modifications and communication. This will include integration of technology for differentiation, such as google classroom and different LMS.</p> <p>Presenters: Amy Arsiwala & Michael Chemris – Franklin Township Board of Education</p>	6 – 8	Forsgate
	<p>Statistics and Social Studies: An Interdisciplinary Collaboration – Participants in this workshop will learn about an interdisciplinary course that integrates social studies and mathematics for students. This once-a-week course provides students with opportunities for thinking quantitatively about the world around them. Implications for core courses will be considered.</p> <p>Presenters: Mark Russo & Joe Orlak – Pascack Valley Regional High School District</p>	6 – 12	Nassau

<p>How to Teach Probability and Statistics and Have Fun! – <i>Let me show you how to use simple manipulatives to reinforce or introduce concepts in statistics and probability. Be prepared to have fun!!</i></p> <p>Presenter: Doug Smith – Retired</p>	6 – 12	Kingston
<p>Using Posters to Reinforce Standards For Mathematical Practice in Geometry – <i>The Standards for Mathematical Practice are integral for successful teaching of the NJ Student Learning Standards for Mathematics. This presentation will discuss using posters and other large-scale group projects to reinforce the use of the Standards for Mathematical Practice within classroom activities.</i></p> <p>Presenter: Gerard Marrone – Point Pleasant Board of Education</p>	9 – 12	Princeton
<p>Engagement in Math Class starts with Wondering – <i>This session will examine problem solving in the mathematics class by asking students to wonder about problems by peeling back the layers of a problem: eliminating the text, eliminating the jargon and eliminating the structure.</i></p> <p>Presenter: Eric Milou – Rowan University</p>	General Interest	Cranbury

10:35 - 11:35	Keynote Address: Diane Briars, Immediate Past-President, National Council of Teachers of Mathematics (NCTM)	Grand Ballroom
<p>High-Leverage Practices to Turn Standards into Learning</p> <p><i>High quality standards and engaging activities are essential elements of effective mathematics curriculum and instruction. However, how activities are enacted in the classroom determines what students learn from them. In this session, we'll examine high-leverage instructional practices—those that will produce the greatest impact for your effort—in enacting engaging and motivating activities in your classroom.</i></p>		

11:35 - 12:35	Lunch and Welcoming Remarks: Makoto Yoshida, President, Association of Mathematics Teachers of New Jersey (AMTNJ)	Grand Ballroom
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12:45 - 1:45	Third Round of Breakout Sessions	Level	Location
	<p>Demystify Word Problems by Thinking Like a Detective – <i>Get your detective gear on as we investigate the structure of word problems. We will explore books that help students visualize the actions in word problems and use easy-to-make work mats and manipulatives to model and solve all types of addition and subtraction word problems.</i></p> <p>Presenter: Denise Rawding – Newark Public Schools</p>	PK – 2	Mercer
	<p>Geometry and Early Math Literacy – <i>I have published a unique book that teaches K-8 advanced geometric concepts through literacy in such a fun and engaging way. The activities connected to the book allow for students in grades K-8 to meet the New Jersey Student Learning Standards in Geometry. You can read more about the book and the activities at www.grandaddyP.com</i></p> <p>Presenter: Janel Williams – Camden City School District</p>	PK – 8	Cranbury
	<p>Fractions from Grade 3 through Calculus – <i>It is critically important that students have a coherent, sequential and deep understanding of fractions before they can be successful in high school mathematics and beyond. This session will explore the progression of fractions with examples from grades 3 through calculus.</i></p> <p>Presenter: Arpi Lajinian – Northern Valley Regional High School at Old Tappan</p>	3 – 12	Princeton
	<p>Understanding the Nuances of Being Engaged – <i>Research involving dozens of classrooms have led us to (re)define the concept of engagement. We share over 10 different types of engagement that commonly occur. By expanding upon the more traditional notions of engagement, we are better able to facilitate opportunities for students to interact with and learn mathematics.</i></p> <p>Presenters: Lisa Warner – William Paterson University, Roberta Schorr – Rutgers University & Lina Sanchez-Wall – Farleigh Dickenson University</p>	3 – 12	Kingston

<p>Dynamic Instruction and Assessment Used to Inspire Self-Motivated Students – <i>Prepare, present, instruct, assess, remediate, and provide appropriately challenging opportunities for higher-level thinking - This is the daily responsibility of a teacher in a nutshell. Easy, right? What if I told you our middle school students are capable of taking on some of these responsibilities as they grow to be advocates for their own educations? I have experimented with an array of technology-based resources that offer opportunities for dynamic and engaged learning, and I'm excited to share some of my resources and strategies with you. Districts who have implemented or are looking to implement a one-to-one device program are encouraged to attend.</i></p> <p>Presenter: Mina Harris – Quibbletown Middle School, Piscataway</p>	6 – 8	Middlesex
<p>Modeling Mathematics in Grades 6-12 – <i>This course will focus on increasing student achievement in modeling real world situations with mathematics. We will look at the New Jersey Student Learning Standards related to modeling and how we can incorporate them into our classes on a regular basis. Teachers will leave the session with examples they can use with their students.</i></p> <p>Presenters: Kelly Bosworth – Madison Public Schools & Dana Collins – Flemington-Raritan School District</p>	6 – 12	Brunswick
<p>High School Mathematical Modeling – <i>This workshop will work with high school mathematical models and activities, which are appropriate for use in Pre-Algebra through Pre-Calculus.</i></p> <p>Presenter: Rosemary Bayliss – Sparta Township Schools</p>	6 – 12	Nassau
<p>Employing Engaging Problems Comporting to The Standards – <i>This hands-on workshop will incorporate rich problems that comport to The Eight Standards For Mathematical Practice alluded to in The Common Core. Problems will be selected from the areas of number, algebra, geometry, discrete mathematics and pre-calculus. Please join us to view dynamic problem solving in action!</i></p> <p>Presenter: Jay Schiffman – Rowan University</p>	6 – 12	Forsgate
<p>Composition & Inverses with Quadratic Functions – <i>Bring a graphing calculator to explore composition of functions, domain and range, finding inverse functions and relations and graphing on a restricted domain. We will make connections between the symbolic, graphical and numerical representations and discuss strategies for effectively incorporating technology into the classroom.</i></p> <p>Presenter: Fred Decovsky – Teachers Teaching with Technology</p>	9 – 12	Windsor

1:55 - 2:55	Fourth Round of Breakout Sessions	Level	Location
	<p>Game On: Productive Teacher Moves to Enhance Game Play – <i>Although they are often the most engaging part of the period, math games are not normally placed front and center in the elementary curriculum. Through an in-depth exploration of the game Factor Captor, participants will learn four teacher moves to make the game-playing experience more robust. No experience necessary!</i></p> <p>Presenters: Joe Schwartz & Theresa Vetrecin – East Brunswick Public Schools</p>	PK – 5	Cranbury
	<p>Designing Coherent Math Tasks – <i>This presentation is designed for K-8 educators. We will explore the Coherence Map for K-8 Standards, the math shifts in the NJSLs, and multiple platforms/strategies to help build student engagement that will lead to increased high level learning opportunities. A version of the presentation can be found here: https://docs.google.com/presentation/d/1TcSvSunVjtwHUIHrk_NC-_SQtOvcHc5uA9pB6-noBwU/edit?usp=sharing</i></p> <p>Presenter: Joshua Zagorski – Maple Shade School District</p>	PK – 8	Forsgate

<p>Using a SMART Board in the Mathematics Classroom – Use SMART Board’s Notebook software to improve and enhance the learning of mathematics. Visual representation on the smart board helps students to understand and remember mathematical information. Increase student involvement with SMART Response or Response 2 for formative assessments. SMART Lab activities add fun and student interest. (Participants are encouraged to bring their own Smart Device.)</p> <p>Presenter: Linda Treilman – Mercer County Community College</p>	3 – 12	Windsor
<p>Making Connections with Powerful Pattern Strategies – Looking for a new way to help students grasp integer and rational number operations, percents, expressions, exponent work and more? This workshop will feature hands-on activities that teach 6th - 8th grade students how to make powerful connections from prior learning to new knowledge through numeric, algebraic and visual patterns.</p> <p>Presenter: Ann VanSickle – Valley Middle School</p>	6 – 8	Mercer
<p>Connecting Math to Science II – This second in a series of talks about connecting math will review key elements of the first talk, detailing the connections between trigonometry and ocean mechanics. Virtually all students have repeatedly seen ocean waves coming ashore, so connecting this wave behavior to trigonometry principles makes learning natural and less intimidating.</p> <p>Presenter: Patrick Murray – Newark Public Schools</p>	6 – 12	Nassau
<p>Confidence Intervals and P-values: Deepening Understanding of Key Ideas in Statistics – We will discuss how to interpret, use, and make connections with three important topics in statistics: Confidence Intervals, Confidence Levels, and P-Values. The primary goal of this session will be to develop a deeper understanding of these topics and therefore get a better sense of how to teach these key ideas to students.</p> <p>Presenter: Ryan Postman – Pascack Hills High School</p>	6 – 12	Kingston
<p>Using Desmos To Strengthen Math Instruction – Use of Customized Desmos lessons to strengthen math instruction for Algebra I. Desmos is a free web based program that can be utilized to explore every concept in mathematics! Participants will create activities that can be used immediately in the classroom.</p> <p>Presenter: Nicole Zayatz – Rutherford Public Schools</p>	6 – 12	Princeton
<p>Using the Concrete-Representational-Abstract Sequence to Support All Students – The Concrete-Representational-Abstract sequence of instruction is a brain-based teaching best practice to support the needs of all students in attaining rigorous standards in math and science. Using it should not be an event nor compliance! Fidelity to the sequence and using it to full advantage throughout instruction assists in teaching to the learner diversity present in all classrooms, and especially in classrooms with struggling/at-risk students, students with identified learning needs, and English Language Learners.</p> <p>Presenter: Jeannine Lanphear – North Brunswick School District</p>	General Interest	Brunswick

3:05 - 3:15

Evaluations and Professional Development Certificates

Grand Ballroom

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