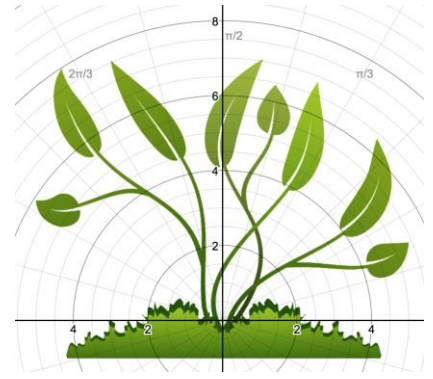


The Association of Mathematics Teachers of New Jersey

2018 Annual Winter Conference
Fostering Growth Mindsets in Every Math Classroom:
Creating Productive Learning Environments

Wednesday, February 7, 2018
Ramada Plaza Hotel & Conference Center
Monroe Township, NJ



Registration & Breakfast: 7:00 a.m. to 8:00 a.m., Grand Ballroom
Vendor Exhibits: 8:00 a.m. to 2:45 p.m., Front Foyer
Lunch: 11:30 a.m. to 12:30 p.m., Grand Ballroom
Closing Session & Door Prizes: 2:45 p.m. - 3:00 p.m., Grand Ballroom

Please note that the schedule is subject to change due to the availability of our volunteer speakers.
 Any changes to the program will be posted at <http://amtnj.org/2018-winter-conference/>

| Grade Level | Session 1: 8:00 a.m. – 9:00 a.m. | Location |
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| K-2 | <p>Balancing Equations in the Primary Grades</p> <p><i>Balancing equations is perhaps one of the most challenging concepts we are responsible for in the early grades. We will explore activities and strategies that will make the concept accessible for all learners.</i></p> <p>Presenter: Heidi Bromley, Questar III; New York State Association of Mathematics Supervisors</p> | Mercer |
| K-8 | <p>Strategies to Foster a Growth-Mindset in a Classroom</p> <p><i>Growth-Mindset is quickly becoming the new buzzword in education. In this session, you will be introduced to Class Dojo’s engaging video series and activities that promote a growth mindset, and can be used immediately in your classroom! In addition to these resources, we will look at other videos and resources for an older audience. Together we will practice specific-positive feedback to praise the effort, strategies, focus, perseverance, and improvement of others through a hands-on activity.</i></p> <p>Presenter: Kristy Perna, Livingston High School</p> | Middlesex |
| 3-8 | <p>Creating Independence for the Struggling Learners</p> <p><i>In this workshop, you will have the chance to explore strategies and resources that will allow all your students, yes even those who struggle, to work independently and succeed in the math classroom.</i></p> <p>Presenters: Lora Petersen & Judy Doslik, Readington Twp Public Schools</p> | Windsor |
| 6-8 | <p>Helping Students Succeed in Algebra through Manipulatives</p> <p><i>Do your students struggle with algebraic concepts? Discover how manipulatives can be used to help your students understand algebraic concepts such as integer operations, solving equations, polynomial expressions, and graphing.</i></p> <p>Presenter: Kevin Dykema, Mattawan Consolidated Schools</p> | Brunswick |

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| 6-12 | <p>Effective Ways to Use Desmos in the Math Classroom</p> <p><i>In this presentation, we will discuss how to use the Desmos graphing calculator, activity builder, and applets in high school math classes. We will explore tools and teacher guides, and demonstrate how to use previously created activities. We will also talk about how using Desmos can help students learn actively and understand mathematics visually. We will show how to create the activities and discuss the experience of using Desmos activities in the math classroom especially for algebra 1, algebra 2, geometry, and calculus.</i></p> <p>Presenters: Kara Teehan & John Kerrigan, Middletown Township</p> | Forsgate |
| 6-12 | <p>Math Leadership-Changing Pathways 2 Success</p> <p><i>An interactive approach to exploring 6-12 Math sequencing for Math leaders. Have you wondered if all students should learn Algebra in Middle school? Does Geometry come before Algebra 2 or after? Come join me in exploring Math pathways for success!</i></p> <p>Presenter: Jennifer Goforth, Montclair Public Schools</p> | Kingston |
| 6-12, Higher Education | <p>Patterns, Puzzles and Magic to Foster Engagement</p> <p><i>Mathematics needs to engage students and promote meaningful discourse. In this hands-on session, we focus on solving rich problems involving algebra, geometry, pre-calculus and discrete mathematics that yield meaningful patterns that are fun and yield unexpected and somewhat surprising results that culminate in aha moments. Please join us in our magical journey.</i></p> <p>Presenter: Jay Schiffman, Rowan University</p> | Princeton |
| 8-12 | <p>Student Video Projects that Promote Mathematical Modeling in the Classroom</p> <p><i>During this session, the presenter will share projects that help students' conceptual understanding of linear functions and how these functions are used in real world applications. Participants will take home a lesson plan, which is designed for other functions as well. This activity incorporates mathematics (algebra), science, and technology.</i></p> <p>Presenter: Dianna M. Sopala, AMTNJ Past President & Northern Valley District</p> | Cranbury |
| 9-12 | <p>ePortfolios & Habits of Mind</p> <p><i>Combining habits of mind and graduation portfolios into student created ePortfolios.</i></p> <p>Presenters: Carly Toth & Stephanie Robotin, Hunterdon Central Regional High School</p> | Nassau |

| Grade Level | Session 2: 9:15 a.m. – 10:15 a.m. | Location |
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| K-5 | <p>Number Talks and Learning Progressions</p> <p><i>Understand how Number Talks can change your teaching! This session will help you understand the structure of a Number Talk and the K-5 techniques for developing a foundational number sense and ability to think flexibly with numbers. Together, we will explore K-5 learning progressions that will provide teachers with developmental strategies to help plan Number Talks throughout the year!</i></p> <p>Presenters: Dominique Paladino & MJ Wieland, Pascack Valley Regional High School District</p> | Mercer |
| 3-8 | <p>Using Engaging Activities to Move Students Along the Continuum</p> <p><i>Did you ever feel like your students weren't ready to learn the skills you are supposed to teach? This session will explore ways to identify where your students are in relation to standards progressions and provide a variety of resources to meet their needs.</i></p> <p>Presenter: Betty Napoli, Galloway Township Public Schools</p> | Middlesex |
| 9-12 Higher Education | <p>Alternative Assessments Using Green Globes and the Desmos Calculator</p> <p><i>Learn about two major High School Projects that will transform your students and help them to learn and to understand what they are doing. There is a "huge" difference between "Doing" mathematics and "Understanding" mathematics. Come learn how to make that happen. If possible, bring your laptop or smart device to begin to experience this for yourself.</i></p> <p>Presenter: Neil D. Cooperman, Millburn High School</p> | Forsgate |

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| 6-8 | <p>Using Math Workshop to Address the Needs of All Learners</p> <p><i>As challenging as our standards are, the work of teaching to bring classrooms of unique learners towards these goals is even more so. Using a workshop model with a variety of activities can assure that all students are engaged and actively learning in our classrooms as they ascend through the curriculum.</i></p> <p>Presenters: Allyson Greenstein & Devan, Green, Morris School District</p> | Nassau |
| 6-12, Higher Education | <p>Where Am I Ever Going to Use This Stuff?</p> <p><i>We will talk about using real life applications of mathematics to engage students in middle and high school. Some of the applications include divisibility and error detecting codes, prime numbers and internet security, applications of conic sections, and others.</i></p> <p>Presenter: Robert Rogers, SUNY Fredonia</p> | Cranbury |
| 6-12 | <p>Using Dialogue Journals to Support Rich Math Discourse</p> <p><i>Dialogue Journals (DJs) are an engaging way to get students thinking and communicating like mathematicians. You will engage in the DJ process to collaborate to solve complex problems and then learn how to use DJs to create discourse-rich math classes.</i></p> <p>Presenter: Jill Perry, Rowan University</p> | Windsor |
| 9-12 | <p>Computational Geometry: A Gentle Introduction</p> <p><i>Some geometry problems require algorithms or other mathematics to solve them. In this session we will explore two examples for high school: the Art Gallery problem, which places guards or cameras at vertices of polygons; and the Facility Location problem, which calculates the best location for new facilities like restaurants and hospitals.</i></p> <p>Presenter: Chuck Biehl, HS Math Consultant</p> | Princeton |
| 9-12 | <p>Advanced Algebra with Finance-A 3rd/4th Year Math Course</p> <p><i>Selected topics from Algebra 2, probability, statistics, trigonometry, geometry and precalculus are used to cover banking, credit, income taxes, auto insurance, investments, mortgages, budgeting, and more, with only an algebra 1 prerequisite.</i></p> <p>Presenter: Robert Gerver, North Shore High School, Retired</p> | Kingston |
| K-12 | <p>Growth Through Online Formative Assessment</p> <p><i>Formative assessment tools allow students to monitor their own learning and work at their own pace. Discover online tools that can be used in class or at home to foster student growth.</i></p> <p>Presenter: Shira Brown, West Morris Mendham High School</p> | Brunswick |

| Grade Level | Session 3: 10:30 a.m. – 11:30 a.m. | Location |
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| ALL | <p>Keynote Speaker</p> <p>Dan Meyer, Chief Academic Officer at Desmos</p> <p>Full Stack Teaching</p> <p><i>Two teachers can take the same idea for a lesson and experience vastly different results in class. This is often because one teacher taught from the full "stack" of questions and the other taught from just part of it. We'll look at the contents of that stack and learn how to put the full stack of questions to work in your classes.</i></p> | Grand Ballroom |

Lunch & Vendors: 11:30 a.m. – 12:30 p.m. , Grand Ballroom

| Grade Level | Session 4: 12:30 p.m. – 1:30 p.m. | Location |
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| K-2 | <p>Fraction Foundations</p> <p><i>Fractions are fundamental in mathematics, the initial understanding starting in the primary grades. Let's create ways to provide building blocks that will sustain our students through fractional work that starts in 3rd grade and intensifies from there.</i></p> <p>Presenter: Heidi Bromley, Questar III; NYSAMS</p> | Mercer |
| K-8 | <p>Math Rocks!</p> <p><i>"Math Rocks!" is a unique and engaging way of connecting math and music in a live, multimedia performance. Classic rock songs are paired with original lyrics and PowerPoint slide shows to present and explain concepts ranging from basic counting to algebra.</i></p> <p>Presenters: Anne Bercau & Gary Hank, Lopatcong School District</p> | Kingston |
| 3-8 | <p>Building Confidence and Fostering Mathematical Discourse Through Open-Ended Questions</p> <p><i>Learn engaging ways to promote student participation and build confidence. This session will explore resources designed to get student talking and thinking about mathematics all without the fear of failing! Walk away with a collection of materials and tricks that are easy to implement, fun to use, and can be scaffolded to all levels!</i></p> <p>Presenter: Callie Campbell, Link Community Charter School</p> | Nassau |
| 6-8 | <p>Be WISE: Wonder, Investigate, Study, Extend</p> <p><i>Routines support the non-routine! Promote students belief in their own ability to learn math with routines that inspire middle schoolers to take the lead in classroom conversations and construct ideas that last.</i></p> <p>Presenter: Cheryl Kaplun, Kent Place School</p> | Middlesex |
| 6-12 | <p>Image is Everything</p> <p><i>Engage student learning of transformations through the spirit of Swiss educator Pestalozzi: Head, Heart, and Hand. "Ready to launch" classroom activities that will intrigue students to understand how to perform transformations, and then to connect these geometric ideas to art, cryptography, and medical glyphs.</i></p> <p>Presenter: Frances Chin, Clifton High School</p> | Forsgate |
| 6-12 | <p>Charge Up Your Classes with Free Desmos Technology</p> <p><i>Charge up your STEM classes with the Desmos Calculator and Activity Builder. The presenter will show you how the calculator can be used for both teacher demos and student problem-solving. Use movable points, dynamic sliders, quick regression and more to help your students make sense of math and science. Then learn how the Desmos Activity Builder can help you create dynamic activities as well as use pre-built activities from Desmos itself and its user community. Bring a laptop or tablet to participate, or just observe!</i></p> <p>Presenter: Dan Meyer, Desmos</p> | Cranbury |
| 6-12, Higher Education | <p>Teaching to the Whole Child</p> <p><i>Participants will discuss best practices to increase student learning. Emphasis on using age appropriate humor, making all students feel welcome in your classroom, and using seating arrangements to lower student anxiety.</i></p> <p>Presenter: Ana Woolsoncroft, Willingboro School District, Mercer County College</p> | Windsor |
| 9-12, Higher Education | <p>Re-Designing the PreCalc-Calc 3 Arc Reflectively</p> <p><i>This session will demonstrate a vertical curriculum re-alignment that promotes achieving learning outcomes and information retention through student reflections and daily foundational questions.</i></p> <p>Presenters: Michal Matthew & Kenneth, Horwitz, NJIT</p> | Princeton |

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| K-12 | <p>Developing Growth Mindset with New Teachers</p> <p><i>A significant amount of research has revealed the impact of mindset on student achievement. The School District of the Chathams redesigned their new teacher orientation program to focus on the essential question: "How does mindset affect student learning?" The presentation will focus on the content and structure of the program, teacher's reflections related to mindset as well as what the district learned while implementing the program.</i></p> <p>Presenters: Kathleen O'Connor & Sean Devine, School District of the Chathams</p> | Brunswick |
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| Grade Level | Session 5: 1:45 p.m. – 2:45 p.m. | Location |
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| K-2 | <p>Mathematical Discourse and Problem Solving</p> <p><i>What is productive struggle in mathematics? Why and how should we allow our students to struggle? Can children learn from an incorrect answer? Do you prepare for student mistakes? Join us as we explore various ways to foster an environment of productive struggle in your school and classroom. Productive struggle should not be looked at as a frustration but more about doing and trying something new.</i></p> <p>Presenters: Meghann Cavanagh & Joy Daniels, Long Branch Public Schools</p> | Mercer |
| 3-5 | <p>Why Does it Work? Operations with Fractions</p> <p><i>In this session we will focus on the understanding of operations with fractions, including deep knowledge of why computation procedures work. We will use a variety of contexts and models, and will also analyze common misconceptions and inappropriate strategies students use to solve fraction problems.</i></p> <p>Presenter: Irina Lyublinskaya, College of Staten Island</p> | Middlesex |
| 3-12, Higher Education | <p>Extensions and Apps to increase use of technology and collaborative Learning in the Math Classroom</p> <p><i>This session will provide you with easy ways to grade assignments and provide formative feedback with free digital tools. We will share how to create a positive & collaborative learning experience in your classroom and allow for easier presentation of material.</i></p> <p>Presenters: Amy Arsiwala & Mike Chemris, Franklin Township Public Schools</p> | Princeton |
| 6-8 | <p>Finding Area Through Pick's Theorem</p> <p><i>Using Pick's Theorem is a wonderful way to combine graphing on the coordinate plane, finding areas of polygons and working with slope.</i></p> <p>Presenter: Anita Schuloff, Paramus Catholic High School (Retired)</p> | Brunswick |
| 6-12, Higher Education | <p>Improving Math Skills and Confidence by Paying Attention to Detail</p> <p><i>Students can refine their thinking and improve their mindset by carefully focusing on the details of the question and being fully present and in the moment. Multiple choice exams like state tests, Regents and SAT/ACT provide learning opportunities through the compare/contrast of the possible answers. Studying these multiple choice options and identifying potential errors leads to deeper comprehension, higher confidence and better grades while improving problem-solving skills. Participants will receive a collection of excellent questions with 'learning opportunities'.</i></p> <p>Presenter: Robin Schwartz, Math Confidence / College of Mt. St. Vincent</p> | Windsor |
| 6 - 12 | <p>Pennies, Pillars, Pizzas, Polynomials & Probability</p> <p><i>Stand in line and let coin flips lead us forward or back. Walk away with a series of lessons that inspire students' belief in the power of their own questions to learn probability, statistics, and algebra in grades 6-8 and beyond.</i></p> <p>Presenter: Ralph Pantozzi, Kent Place School</p> | Nassau |

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| 9-12 | <p>The Status Quo in High School Mathematics Is Unacceptable</p> <p><i>Today, it seems as if nearly everyone agrees that high school mathematics needs to change. For far too long high school mathematics has not worked for far too many students. High school mathematics has not changed substantially in my lifetime, nor has it changed substantially for most students, teachers & schools. It is clearly an issue—and it is time to discuss and make serious changes.</i></p> <p>Presenter: Eric Milou, Rowan University & AMTNJ Past President</p> | Cranbury |
| 9-12 | <p>Building Bridges in Math Class</p> <p><i>For the past 10 years I have been teaching secondary math classes with the theme of “Building Bridges.” When I introduce myself and my passion for bridges, I establish the expectations for the class for the year. The year-long theme creates an atmosphere that stimulates discussion and increases student engagement in learning. Building bridges has transformed my classes into collaborative learning communities. The session will also highlight some “good problems” that illustrate “big ideas” in mathematics to start building bridges with content.</i></p> <p>Presenter: Kathleen Carter, North Hunterdon HS</p> | Forsgate |
| K-12 | <p>Creating a More Equitable Mathematics Classroom</p> <p><i>In this session, participants will consider how individual students and groups of students may be experiencing math class. The discussion will touch on some important themes in the mathematics and social justice literature, and specific classroom activities and norms will be highlighted. Issues that will be discussed include tracking, labeling, classroom environment, language, and opportunity contexts.</i></p> <p>Presenter: Mark Russo, Pascack Valley Regional High School District</p> | Kingston |

CLOSING SESSION & DOOR PRIZES!
2:45 p.m. – 3:00 p.m.
Grand Ballroom