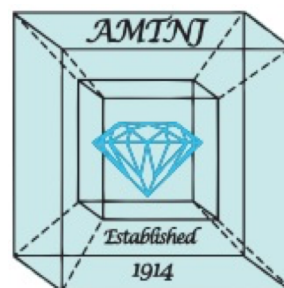


2019 Annual Winter Conference
Mathematical Sense Making by All Students

Thursday, February 7, 2019
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., Grand Ballroom
Lunch: 11:30 a.m. to 12:30 p.m., Grand Ballroom

Please note that the schedule is subject to change due to the availability of our volunteer speakers.

| Grade Level | Session 1: 8:00 a.m. – 9:00 a.m. | Location |
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| K-2 | <p>Problem Solving in the Primary Classroom</p> <p><i>In the real world, students need to identify and apply different strategies to solve various types of problems, but problem solving skills do not develop naturally; they need to be explicitly taught to allow transfer across multiple settings and contexts. In this session teachers will explore problem solving experiences, strategies, methods, and resources for primary grade students. Teachers can take what they learn to create a classroom environment in which students are problem solvers!</i></p> <p>Presenters: Melanie Harding & Meghann Cavanagh, Long Branch Public Schools</p> | Windsor |
| K-5 | <p>Creating Positive Math Mindsets in the Elementary Classroom</p> <p><i>Elementary teachers often are not aware that much of the work and language they use in their math class remains with students for years to come. We will discuss ways in which elementary teachers can create positive feelings toward math among their students and keep them from developing math anxiety.</i></p> <p>Presenters: Elissa Scillieri, Pequannock Township School District</p> | Middlesex |
| K-12 | <p>When Content Standards are Soup, and All of Your Students Have Forks: Student Engagement & Motivation Strategies for the Dedicated Math Educator</p> <p><i>Attendees will learn and practice the art of storytelling and dynamic tension to better engage more math students in their classrooms, using multiple intelligence approaches to learning the same standards-based lesson. Participants in this session will be thoroughly engaged by interacting with each other to experience, first hand, how their students will be learning in the classroom that focuses on student engagement and motivation within each and every lesson.</i></p> <p>Presenters: Erica Hennessy, EH², LLC</p> | Cranbury |
| 3-12 | <p>Using Edulastic to Support Individualized Instruction and Practice Online Assessment Skills</p> <p><i>Teachers will set up an Edulastic Account (free) with their Schools Google Credentials and learn about the great features for individualizing student learning. This Math Technology Tool helps support Learning gaps and practice online test taking skills. Bring your own laptop.</i></p> <p>Presenter: Amy Arsiwala & Corey Cohen, Franklin Township Public Schools</p> | Nassau |

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| 3-12, Higher Ed | <p>Rich Problems Employing Reasoning and Sense Making</p> <p><i>This hands-on session will focus on rich problems selected from K-12 mathematics and. Problems will be selected from number and operations, algebra, geometry, pre-calculus, calculus, probability and discrete mathematics that can be utilized over several grade bands.</i></p> <p>Presenter: Jay Schiffman, Rowan University</p> | Princeton |
| 6-8 | <p>Creativity and Problem Solving in Art and Math</p> <p><i>Students often see math and art as unrelated subjects. See how getting students to notice the details in both subject areas will help students be better thinkers and problem solvers in all their classes.</i></p> <p>Presenter: Natalie Perez, John Hill School, & Amanda Huffman, Franklin Borough School</p> | Mercer |
| 6-12 | <p>"What Do They Really Know? Strategies/Resources that Reflect Student Thinking</p> <p><i>We often get wrapped up assessing and listening for the right next step or the right answer, that we often forget to ask students about their thinking. This workshop will explore resources that foster this type of thinking in the secondary math classroom, including Math talks, WODB, Visual Patterns, Would you rather, legos, etc. These activities can be applied to any course content.</i></p> <p>Presenter: Mallory Lynn & Stacy Winters, School District of the Chathams</p> | Brunswick |
| 9-12 | <p>Advanced Algebra with Finance - A 3rd or 4th Year Math Course</p> <p><i>Selected topics from Algebra 2, precalc, trig, stat, probability and geometry are used to teach banking, credit, budgeting, insurance, incomes taxes, and more, all with an Algebra 1 prerequisite. Perfect for struggling students.</i></p> <p>Presenter: Robert Gerver, North Shore Schools, retired</p> | Kingston |

| Grade Level | Session 2: 9:15 a.m. – 10:15 a.m. | Location |
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| K-2 | <p>Sense-Making Smash K-2</p> <p><i>Are you looking for ways to help students be sensemakers rather than answer getters? Get ready to explore a rapid-fire selection of engaging tasks designed to ignite mathematical curiosity and promote rich math discourse. Used individually or smashed together...activities from Fetter, Fletcher, Stadel, Danielson, Wyborney, Stevens, Kaufmann, Orr, Bushart and more!</i></p> <p>Presenter: LeighAnn Layton & Nan Evans, Brick Township</p> | Cranbury |
| K-5 | <p>Strength in Numbers: Number Sense Routines That Are Not Heavy Lifting</p> <p><i>Want some easily implemented activities to increase student achievement? This presentation will highlight, show examples of, and give educators time to engage in quick daily routines that strengthen students' flexibility and fluidity with numbers. These routines require little preparation, yet provide students meaningful experiences with number relationships and will increase the level of mathematical discourse in your classroom.</i></p> <p>Presenter: Rose Scullion & Lisa Cashin, Middletown Township Public Schools</p> | Nassau |
| K-8 | <p>Math Tasks and Manipulatives: A Winning Combination</p> <p><i>Rich mathematical tasks that engage students in solving and discussing are a vital part of a math classroom. Manipulatives can be utilized to help students with such tasks by providing entry points for each and every student. Come explore some rich tasks utilizing a variety of manipulatives.</i></p> <p>Presenter: Kevin Dykema, Mattawan Consolidated Schools</p> | Middlesex |
| 3-12 | <p>Applying Google Apps to Make Sense in Math</p> <p><i>This session will be presented by two Instructional Technology Coaches and one who is a Google Certified Trainer. Our goal is to share out all the new features of Google Apps beyond the basics and how math concepts can be incorporated and applied using GAFE. If you're a one-to-one district or use computers often with your students then this session is for you. Bring your own laptop.</i></p> <p>Presenter: Ted Samaras & Amy Arsiwala, Franklin Township Public Schools</p> | Windsor |

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| 6-8 | <p>Less Equals More (<=>)</p> <p><i>As educators we have all the tools already in front of us. It just requires some creativity to help bring it to life. Less = More is an encouraging approach to help teachers realize they can assess and teach while their students are learning and deeply understanding the content. Grow while Learning!!!</i></p> <p>Presenter: Amy Miele-Wilkerson, Franklin Township Public Schools</p> | Kingston |
| 6-12 | <p>Geometry Tasks to Build and Assess Student Conceptual Understanding: Decomposition, Area, and Perimeter</p> <p><i>In this session, we'll work through rich Geometry tasks that have a low floor and high threshold. Our session is inspired by work with students who struggled with concepts of conservation of area and multiplicative relationships of changing lengths while decomposing and recomposing geometric figures. We will also discuss the relationship of the tasks to learning trajectories, task design, and the mathematical practice of quantitative reasoning.</i></p> <p>Presenter: Jessica Nuzzi & Victoria Bonaccorso, Montclair State University</p> | Brunswick |
| 6-12 | <p>Making Mathematics Meaningful</p> <p><i>This session will give teachers the opportunity to explore meaningful mathematical problems in middle school and high school which may also involve construction/engineering and the graphing calculator. Teachers are encouraged to bring their own calculators.</i></p> <p>Presenter: Deirdre Brown, Trenton Central High School</p> | Princeton |
| 9-12 | <p>Coding in Algebra and Geometry</p> <p><i>We are incorporating some simple coding into Algebra and Geometry. Students calculate slope using Python, explore angles in polygons with Python Turtle and scatter plot correlation with Google Scripts.</i></p> <p>Presenters: Jane Armelino & Laura Sliver, Hunterdon Central Regional High School</p> | Mercer |

| Grade Level | Session 3: 10:30 a.m. – 11:30 a.m. | Location |
|-------------|--|----------------|
| ALL | <p style="text-align: center;">Keynote Speaker</p> <p style="text-align: center;">Keith Devlin, mathematician (emeritus) at Stanford University</p> <p>What Mathematics Do People Really Need for the 21st Century and How Do We Teach It?</p> <p><i>For over two thousand years, mastery of calculation and procedural symbolics was the price we had to pay to learn and do mathematics. The introduction of cheap electronic calculators in the 1960s rendered mastery of calculation obsolete, and digital systems that execute any formal procedure in the late 1980s removed the need for expertise in procedural symbolics. Today, professional mathematicians hardly ever execute a procedure by hand. For the most part, however, the world's school systems have yet to catch up. Exactly how is mathematics done today, and how is it best taught?</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 |
|-----------------|---|-----------|
| K-5 | <p>Teaching with Patterns</p> <p><i>"Mathematics is the Science of Patterns" - prominent mathematician. Children love patterns. Let's see how we can find and use patterns to help students on their path to mathematical sense making.</i></p> <p>Presenters: Kathleen Wallace, Madison Public Schools</p> | Middlesex |
| K-5 | <p>Building a Reasoning Based Classroom</p> <p><i>Help your students develop number sense and reasoning skills by basing your math instruction in reasoning! With just a few simple tweaks, add a layer of sophistication to activities you are already doing... and leave with some new activities you can implement right away! Participants will leave with ideas, as well printable resources, templates and games.</i></p> <p>Presenter: Kristine Venneman, Middletown Township Public Schools</p> | Windsor |
| K-12 | <p>Developing "Gritty" Kids</p> <p><i>Our kids don't want to challenge themselves with difficult tasks. If faced with something that will give them a run for their money, more often than not, kids will give up; they don't persevere. Let's teach kids how to become "gritty". The focus in your classroom will be on effort, hard work, resilience, perseverance and grit. Kids will be commended for their EFFORTS and their RESILIENCE!</i></p> <p>Presenter: Charleen Schwartzman, Pascack Hills High School</p> | Princeton |
| K-12, Higher Ed | <p>E=MC²: The Math behind this Equation and the Realization that Genius is Common</p> <p><i>Einstein was known for a few things, one being the famous E=MC². Math was always a hard subject for me but I have found a way to multiply genius. Genius is Common is a mindset that the youth take easily. In showing them their own genius they are able to make greater personal strides infinitely!</i></p> <p>Presenter: Myesha Collins, BSN</p> | Kingston |
| 3-5 | <p>Sense Making Smash 3-5</p> <p><i>Are you looking for ways to help students be sensemakers rather than answer getters? Get ready to explore a rapid-fire selection of engaging tasks designed to ignite mathematical curiosity and promote rich math discourse. Used individually or smashed together...activities from Fetter, Fletcher, Stadel, Danielson, Wyborney, Stevens, Kaufmann, Orr, Bushart and more!</i></p> <p>Presenters: Nan Evans & LeighAnn Layton, Brick Township</p> | Nassau |
| 6-12 | <p>DI on the Fly</p> <p><i>Learn how to "DI on the Fly" using Quizizz. Participants will experience the ease of creating and implementing a daily formative (pre)assessment and using the data to form small groups. Participants will walk away with strategies ready to be implemented.</i></p> <p>Presenter: Jodi Dunkelman, Edison Board of Education</p> | Brunswick |
| 6-12 | <p>Enhancing Problem Solving Through the Flipped Classroom</p> <p><i>Want to dive deeper, enhance questioning, and equip students with problem solving skills so they leave us as first rate problem solvers, not second rate calculators? This session will discuss best practices in the flipped classroom model for people of all technological skill levels and will show how this allows for greater time and access to your students to develop those problem solving skills.</i></p> <p>Presenters: Gerard Marrone, Point Pleasant Borough School District</p> | Cranbury |
| 9-12 | <p>Teaching Algebra Without PEMDAS: A New Approach to Simplifying and Solving</p> <p><i>For over 20 years I have been successfully teaching fundamental algebra skills with amazing results to ESL, Integrated/special Ed., Self-contained, Reg Ed and Honors. A true alternative to simplifying and solving without PEMDAS: Consistent steps, better retention, and easy to spot/correct mistakes.</i></p> <p>Presenter: Nicholas Badalato, Kingston High School</p> | Mercer |

| Grade Level | Session 5: 1:45 p.m. – 2:45 p.m. | Location |
|-----------------|--|-----------|
| K-2 | <p>Using Visualization and Decomposition Strategies to Develop Fact Fluency in Grades K-2</p> <p><i>Discover an effective fact mastery method that builds visual and strategy-rich understanding. By strategically clustering groups of facts and sequencing practice, students learn quickly and retain. Students internalize a ten-based structure of numbers that builds facility with regrouping.</i></p> <p>Presenters: Makoto Yoshida, East West Math, LLC</p> | Windsor |
| K-8 | <p>Multiplication</p> <p><i>Experiment with activities that set the stage for multiplication, reinforce textbook work, and review multiplication after mastery is demanded. See how it meshes with other math topics. Play a few games. Leave singing. BYOD.</i></p> <p>Presenter: Agnes Azzolino, mathnstuff.com</p> | Princeton |
| K-12 | <p>Collaborative Problem Solving</p> <p><i>In this session, participants will participate in a "Low Floor, High Ceiling" hands-on math lesson and explore how to plan and facilitate similar lessons in their own classes.</i></p> <p>Presenter: Jeff Lisciandrello, Room to Discover</p> | Brunswick |
| K-12 | <p>One and Done ... Now Teaching is Fun!</p> <p><i>20% of your students take up 80% of your time. Often disruptive classroom behavior dominates that 80%. Imagine speaking to your troublesome student(s) just once, and it ends there. It can happen and it does, let's make teaching FUN!</i></p> <p>Presenter: David Frongillo, Retired teacher, Certified National Trainer</p> | Cranbury |
| 6-12 | <p>Students Checking Their Math (Without a Calculator!)</p> <p><i>While tech has its place, encouraging students to self-assess using their noodle increases metacognition while promoting numeracy and independence for all.</i></p> <p>Presenter: Robin Schwartz, Math Confidence, College of Mount Saint Vincent</p> | Middlesex |
| 6-12 | <p>Wealth and the Equality Relation</p> <p><i>Learn how to develop your students' understanding of the concept of equality in the context of understanding wealth. The net worth equation provides a tangible and exciting application of linear equations.</i></p> <p>Presenters: Philip Dituri & Jack Marley-Payne, FiCycle</p> | Nassau |
| 6-12 | <p>Using Visible Learning to Help Unlock Mathematics</p> <p><i>Using John Hattie's synthesis of research, called "Visible Learning", participants will explore various strategies to help navigate the three phases of learning: surface, deep and transfer.</i></p> <p>Presenter: Jesse Johnson, Middlesex Public Schools</p> | Kingston |
| 9-12, Higher Ed | <p>Why Problem Posing: Math4SocialJustice Makes Sense</p> <p><i>Students of traditional mathematics solve other people's problems without opportunities to pose problems of their own. We explore the success behind a problem-posing, mental health statistics lesson.</i></p> <p>Presenters: Jessica Davidson & Angela Harrington, Montclair State University</p> | Mercer |

Speakers

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Thank you to the AMTNJ members who brought this conference together.

Stephanie H. Cooperman - President & Speaker hospitality

Megha Shukla - Vendors

Tom Walsh - Past President

Susan Landers - Registration

Jelena Komitas - President-Elect

Judy Brendel - Registration

Mark Russo - 1st Vice President & Conference Chair

Janice-Lynn Shuhan - Signs

Andrea Bean - 2nd Vice President

Nicole Ealey - Social Media Liaison

Neil D. Cooperman - Treasurer

Linda Treilman - Speaker hospitality

Special thanks to the members of the Executive Council that made this program possible. Thank you to Jeff O'Brien for all his AV support. Without his behind-the-scenes work, our technology in the conference rooms would not be possible.