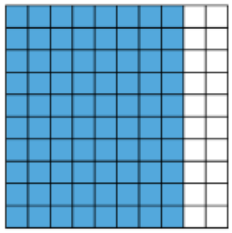
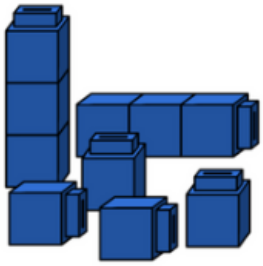
AMTNJ
ASSOCIATION OF MATHEMATICS TEACHERS OF NEW JERSEY

AMTNJ Fall 2024 PreK - 5 Conference

Mathematics in Action:
Bringing the Math Practices to Life





FRIDAY, OCTOBER 25, 2024

8:00 AM - 3:30 PM

Brookdale Community College - Lincroft Campus

765 Newman Springs Road, Lincroft

@amtnj **@amtnj.math**

#AMTNJPreK-5Fall24

Brookdale Community College, Lincroft Campus

Warner Student Life Center (SLC)

Main Academic Building (MAC)

Directions:

From North or South Jersey, use the Garden State Parkway. If you're driving down from North Jersey be sure to choose "Local Exits" lanes after the Raritan Bridge, not the "Express" lanes.

Southbound, coming from North Jersey and New York
To avoid the congestion of Exit 109-Red Bank, our standard exit, you can use Exit 114. Keep right – pay the toll -and make a right onto Red Hill Road. Then make a left at the next light onto Crawford Everett Road. (St. Catherine's Church). Follow to the end – and at the T make a left onto Route 520 (Newman Springs Road). Head East on Route 520 past Christian Brothers Academy (on the left) and Thompson Park (on the right). Brookdale will be on your right – look for our red sign at the roundabout.

If you use Exit 109-Red Bank
At the bottom of the exit ramp, turn right onto Route 520 West (Newman Springs Road). Stay west on Route 520 about two miles; just after the town of Lincroft, Brookdale will be on your left – look for our red sign at the roundabout.

Northbound, coming from South Jersey
Use Exit 109-Red Bank and merge to the FAR left at the bottom of the Exit ramp. Make the left onto Route 520 West (Newman Springs Road). Stay west on Route 520 about two miles, through the town of Lincroft; the College entrance will be on the left.

From Western New Jersey
Take Route 33 towards the Halls Mills Road – NORTH exit. This becomes Kozloski Road; follow north until the intersection with Route 537. Turn right and continue east on 537 until it intersects with Route 34. Turn left onto Route 34 North. At the next traffic light, turn right onto Phalanx Road; stay on Phalanx about 3 miles. The entrance to Brookdale will be on the left after crossing the Swimming River Reservoir bridge.

From Route 18 Northbound
Exit at 15A-Wayside Road. Follow Route 537 to Laird Road to Phalanx Road where you will see the College entrance on the left after the Reservoir.

From Route 18 Southbound
Use the Route 520 East exit and follow to the College.

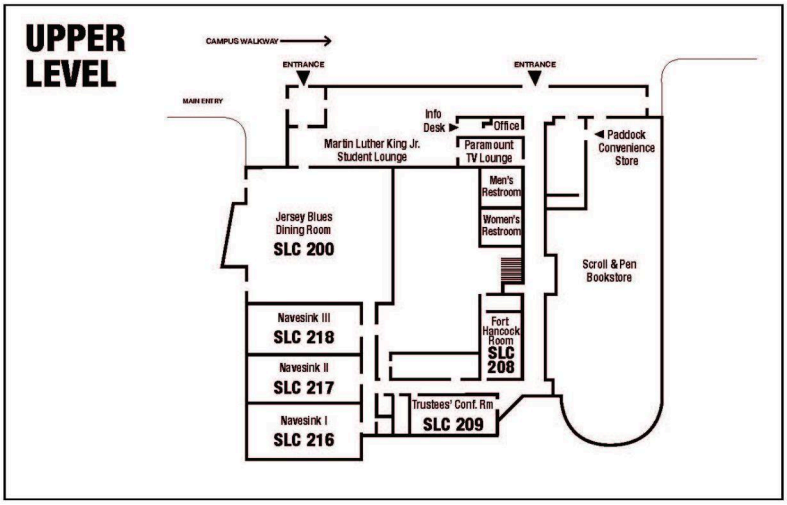
Schedule at a Glance

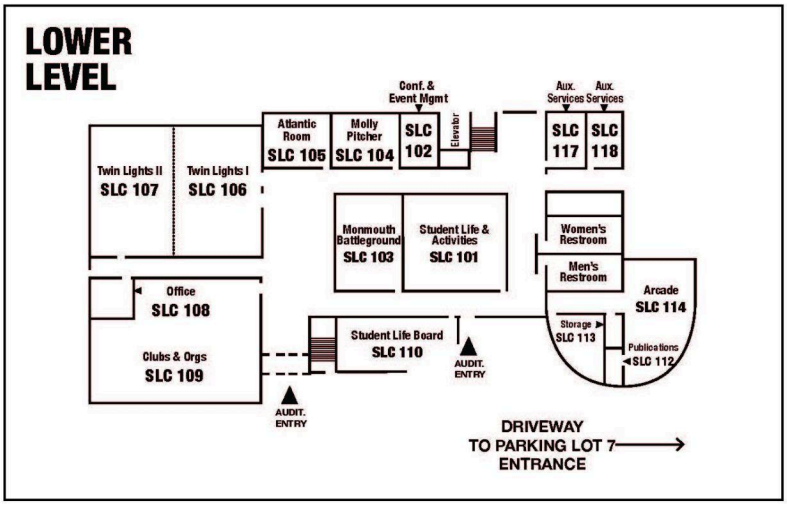
6:45 am	Registration Opens
7:15 am - 7:45 am	**Optional** First Time Attendee Session and Breakfast
7:45 am - 8:00 am	Passing Time
8:00 am - 9:30 am	Featured Speaker Sessions (pre-register for 1)
9:30 am - 9:45 am	Passing Time
9:45 am - 10:15 am	Burst Sessions
10:15 am - 10:30 am	Passing Time
10:30 am - 11:30 am	Hands-on Sessions
11:30 am - 11:45 am	Passing Time
11:45 am - 12:30 pm	**Optional** Partner Sessions and Vendor Time
12:30 pm - 1:15 pm	Brown Bag Lunch (provided)
1:15 pm - 2:00 pm	**Optional** Grade Level Collaboratives (can pre-register for 1)
2:00 pm - 2:15 pm	Passing Time
2:15 pm - 3:15 pm	Hands-on Sessions
3:15 pm - 3:30 pm	Prizes

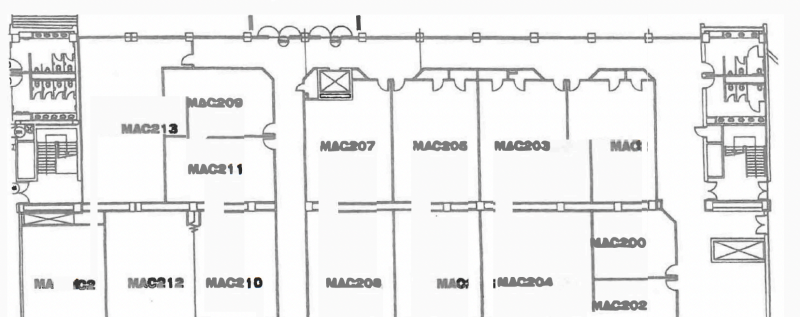
To Access the Internet During the Conference

Network: Brookdale Open
Username: mathteachers
Password: TibxcUai

Registration
Opens at 6:45 AM
SLC - Lower Level
Outside Twin Lights I and II







Thank You to Our Partners

PLATINUM

imagine learning
empower potential™

GOLD

EAI EDUCATION

innovamat

BRONZE

hand2mind

RUTGERS
Continuing Studies
CENTER FOR MATHEMATICS, SCIENCE, AND COMPUTER EDUCATION

ORIGO EDUCATION

Please Visit the Tables of Our Partners and Vendors

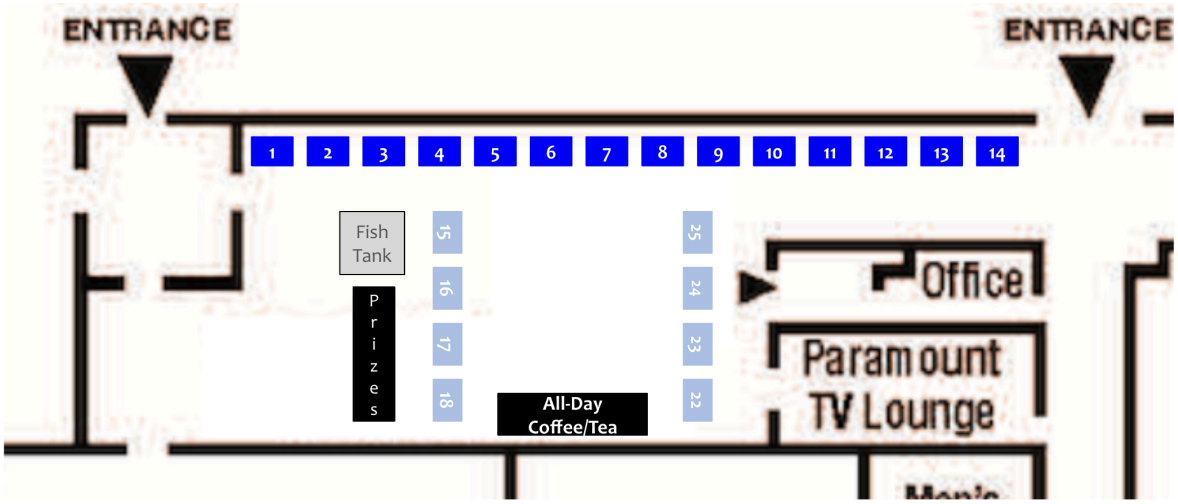
MLK Lounge

Names in Bold are Participating in the Passport to Prizes Game

(see QR code on poster at Registration or on Prize Table to join)

Name	Partner/Vendor	Table Number(s)
Amplify.	Vendor	6
Carnegie Learning	Vendor	2
Curriculum Associates	Vendor	8
EAI Education	**Gold Partner**	15 & 16
Explore Learning	Vendor	5
First in Math	Vendor	4
hand2mind	**Bronze Partner**	22, 23 & 24
Heinemann Publishing	Vendor	1
Imagine Learning	**Platinum Partner**	17 & 18
Innovamat	**Gold Partner**	9 & 10
Montclair State University, Department of Mathematics	Vendor	3
New Jersey Center for Teaching and Learning	Vendor	7
ORIGO Education	**Bronze Partner**	11
Rekindle Education	Vendor	14
Rutgers Center for Math Science and Computer Education	**Bronze Partner**	25

Earn additional entries by visiting the Optional Partner Sessions from 11:45-12:30!



Jersey Blues Dining Room

Optional First Time Attendee Session

7:15 - 7:45 AM

SLC - 217

Come join us for an informative first time attendee session. During this session you will learn more about the focus of our conference and how you can become more involved in AMTNJ. We look forward to meeting you!

Breakfast

7:15 - 7:45 AM

Jersey Blues Dining Room

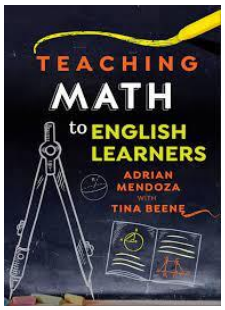
Featured Speaker Sessions

8:00 - 9:30 AM

Academic Language

Adrian Mendoza

SLC - 106



Adrian Mendoza joins as an educational consultant to the Seidlitz Education team from his previous role as an Instructional Coach and Curriculum writer in Texas, with a Master's Degree in Educational Leadership at Texas State University. His commitment leads him to innovate in the education area to support multilingual learners. Adrian has provided Professional Development to educators in districts and educational service centers in the areas of Sheltered Instruction, Language Development, Instructional Coaching, and Student Engagement, working with teachers and parents in the United States, Mexico, and Costa Rica. He is the author of *Teaching Math to ELs*. Adrian Mendoza, Seidlitz Education

Teaching Math to ELs and ALL Students

Are you ready to provide instructional strategies to engage your ELs and ALL students in your math classroom? This language-rich interactive workshop will be focused on mathematical processes needed to acquire and demonstrate mathematical understanding that will support making content comprehensible and developing academic language. The different strategies will be aligned to different components of a math lesson to demonstrate how educators can incorporate academic reading, writing, and conversations through student-led activities.

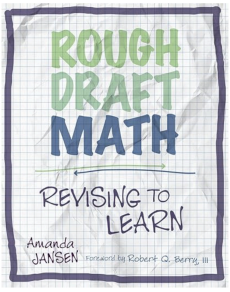
SMP 3, SMP 4, SMP 7

Revision

Mandy Jansen

SLC - 107

Sponsored by



Amanda (Mandy) Jansen is a Professor in the mathematics education program area in the School of Education at the University of Delaware with a joint appointment in the Department of Mathematical Sciences. Earlier in her career, she taught middle school mathematics in Arizona. Mandy earned her PhD in educational psychology from Michigan State University. As a mathematics teacher educator, she facilitates professional learning for in-service teachers in grades K-12, and she teaches future elementary and middle school mathematics teachers in UD's undergraduate program. She conducts research on motivation and engagement in mathematics classrooms, and her latest work addresses how teachers foster engaging mathematics lessons. For her book, *Rough Draft Math: Revising to Learn*, she curated strategies that teachers have used to teach mathematics in ways that honor strengths in students' in-progress thinking and that emphasize growth in thinking through revising.
Amanda (Mandy) Jansen, University of Delaware

Using Rough Drafts and Revising to Engage Students in Mathematical Practices

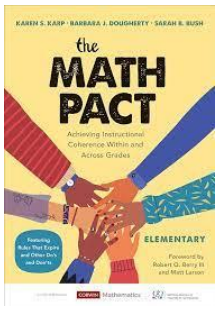
Rough drafting and revising is a promising practice to incorporate into the mathematics classroom. Mathematics has been historically experienced by students as a place where successful students are those who are able to get correct answers quickly. By inviting students to share their rough draft thinking and giving them opportunities to revise, we can change the narrative on what it means to be good in mathematics and provide more students with opportunities to see themselves as good at mathematics. In this interactive session, participants will have multiple opportunities to engage in drafting and revising their mathematical thinking. These experiences will be explicitly connected to mathematical practices, including: making sense of problems and persevering in solving them; constructing viable arguments and critiquing the reasoning of others; attending to precision; looking for and making sense of structure; reasoning abstractly and quantitatively; modeling with mathematics. Those who attend this session will be likely to take away the following: (a) an experiential understanding of the value of drafting and revising in mathematics, (b) concrete and actionable activities to incorporate into classroom practice, and (c) a greater awareness of how rough drafting and revising in mathematics can engage students in mathematical practices.

SMP 1, SMP 3, SMP 4, SMP 6, SMP 7, SMP 8

Coherence and Consistency

Karen Karp

SLC - 216



Karen Karp, author of numerous articles including *Rules that Expire*, will jumpstart your journey by sharing how creating a *The Math Pact* provides an organized way to achieve high quality and equitable mathematics instruction in your school and district. By working through ideas important to a *The Math Pact*, you will embark on creating a mathematics whole-school agreement (MWSA), a structure designed to enhance students' strengths and address their learning needs. Join Karen Karp in making the dream of a high-quality cohesive and collaborative approach to mathematics learning a reality!
Karen Karp, University of Louisville (Kentucky)

The Math Pact: Building Instructional Coherence
Have you ever considered all the inconsistencies and confusion that K-12 students experience throughout their mathematics journey as they move from unit to unit, grade to grade, and school to school? Never has it been more important to align mathematics instruction across grades or courses rather than repeating or mismatching mathematics instruction from one class to the next – it is time to collectively agree to move away from mathematics appearing to be a set of mysterious and disconnected tricks and tips! When students instead experience consistent messaging and see and hear familiar vocabulary, concepts, tools, and strategies, they move successfully into more sophisticated ideas.

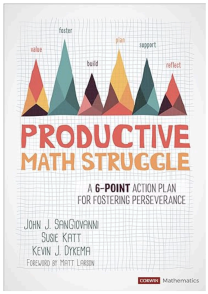
SMP 2, SMP 4, SMP 5, SMP 6

Productive Struggle

Kevin Dykema

SLC - 217

Sponsored by



Kevin Dykema is President of the National Council of Teachers of Mathematics (NCTM), an international mathematics education organization with more than 30,000 members. He has taught 8th grade mathematics for over 25 years and is currently at Mattawan Middle School in southwest Michigan. Kevin is a frequent speaker before mathematics education audiences and has co-authored *Productive Math Struggle,* published by Corwin. He has also written several articles for *Mathematics Teacher: Learning and Teaching PK-12.* Dykema loves working with others to help improve mathematics education for each and every student.
Kevin Dykema, National Council of Teachers of Mathematics (NCTM)

Engaging Students in Productive Math Struggle

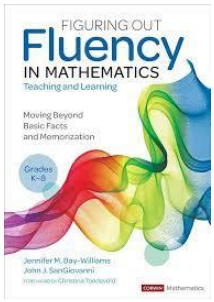
For true learning to occur, we must allow students to grapple with the material to develop understanding rather than memorizing sets of facts. Join in as we explore how to make this a reality in our schools and with the teachers and students we support. The National Council of Teachers of Mathematics includes productive struggle as one of the 8 effective teaching practices, but it doesn't occur successfully unless we are thoughtful about it. Come explore a 6-step action plan that can help foster productive struggle and create perseverance in all content areas.

Primary SMP: 1
Supporting SMPs: 7 and 8

Fluency

John SanGiovanni

SLC - 218



John SanGiovanni is a best-selling author and nationally recognized leader in mathematics education. He works as a mathematics coordinator in Howard County, Maryland leading curriculum development, professional learning, assessment, and intervention. John is passionate about developing mathematics specialists, coaches, and teacher leaders in his
district and at McDaniel College. He also works as an international consultant providing professional learning for mathematics content,
pedagogy, and curriculum design. John is a frequent speaker at conferences across the country. He is active in professional organizations serving on the Board of Directors for both the National Council of Teachers of Mathematics and the National Council of Supervisors of Mathematics.
John SanGiovanni, Howard County Public Schools (Maryland)

Foundations for Fluency

Fluency is built on a foundation of understanding and skill within a range of concepts. This session unpacks those essentials helping participants recognize how they build toward greater fluency. It is perfect for elementary teachers, including primary teachers, as well as anyone who designs or
provides interventions for students in later grades. A collection of classroom resources will be provided.

SMP 3, SMP 6

30 minute Burst Sessions		
9:45 - 10:15 AM		
Cheryl Berkuta Old Bridge Township Public Schools	**Pattern Power: Unlocking Mathematical Mysteries in Upper Elementary**	3-5
SLC 103	"Mathematics is the study of patterns." This profound statement is attributed to British mathematician G.H. Hardy and resonates deeply in the realm of mathematical education. Despite its significance, the essence of patterning is sometimes overlooked in traditional textbooks and classrooms, overshadowed by other topics. Join me in a rediscovery of the beauty and importance of patterns in mathematics. Delve into engaging activities designed to provide students with a solid foundation in patterns and functions. Explore how patterns are intricately woven throughout the mathematics content standards and embodied in the Standards for Mathematical Practices (SMP7 and SMP8). Together, let's reignite a passion for patterns in our teaching practices and empower our students to unlock the mysteries of mathematics through the exploration of patterns. *Focus: Look for and make use of structure., Look for and express regularity in repeated reasoning.*	
Phyllis Hillwig Eurekii **Arly Hernandez** Eurekii	**Tackling Word Problems Through Stories and Pictures**	K-5
SLC 104	Students often get scared when they have to tackle multi-step word problems. In this workshop, participants will learn a fun, anxiety-free approach using stories and pictures to understand the context of the problem and set the right framework to solve the problem. In this workshop we will share examples from grades represented in the audience or grades two through five using questions found on the NJSLA. Participants will have an opportunity to use pictures and stories to help students map out the steps necessary to solve multi-step word problems. They can take these examples back immediately and use them in the classrooms. A common approach that educators have used to help solve word problems is identifying key words, outlining and pulling out numbers. But doing this doesn't take into consideration the context of the problem, build number sense or conceptual understanding. This workshop is to give teachers a more effective alternative that also leverages math practices. We have witnessed students using this approach and having much more success with solving word problems while building confidence and better understanding of what is being asked. *Focus: Make sense of problems and persevere in solving them., Model with mathematics.*	

Christa Mawn Manville School District / Montclair State University	**Dynamic Routines to Promote Mathematical Practice Standards**	K-5
SLC 106	Join us to explore mathematical routines that you can integrate into your classroom to cultivate mathematical thinkers and support the implementation of the eight mathematical practice standards. In this interactive session, participants will engage with these routines first from the perspective of a student, actively participating in the activities, and then from the viewpoint of a teacher, discussing how these practices connect to mathematical standards and the advantages of incorporating them into their teaching. Walk away with practical, ready-to-use routines that you can implement in your classroom tomorrow! *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others.*	
Deirdre Richardson New Jersey Department of Education	**Engaging Young Learners through Data Literacy: An Overview of the 2023 NJ Student Learning Standards for Mathematics in K-5**	K-5
SLC 107	This session is designed to introduce participants to the new data literacy expectations in the 2023 New Jersey Student Learning Standards for Mathematics (NJSLS-M). Participants will learn about available resources to support implementation and be introduced to any changes in the structure and content across all domains of the recently adopted NJSLS-M for Kindergarten to grade 5. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others., Model with mathematics., Use appropriate tools strategically., Attend to precision.*	

Nicole Nadolny North Hanover Township School District **Joshua Raposo** North Hanover Township School District	**Empowering Students: Google Slides for Sharing Mathematical Thinking**	K-5
SLC 208	In this interactive session, we'll explore the transformative power of facilitating student discourse in mathematics using the Google Slides app, a versatile tool for students to express their ideas visually and verbally. Capture your student's work using your smart device - whether it's a smartphone or tablet. Then seamlessly integrate it into your Google Slide presentation on the app. Finally, project the student's thinking onto the classroom screen, allowing everyone to see and engage with their work in real-time. You can easily display all levels of student work from how students sorted shapes in Kindergarten to how they created a histogram to represent a data set in Grade 5. Discover how to leverage the Google Slide app to encourage peer learning, foster creative thinking, promote discourse, and deepen understanding of mathematical concepts. *Focus: Construct viable arguments and critique the reasoning of others., Model with mathematics., Use appropriate tools strategically., Attend to precision.*	
Nora Pettyjohn Hazlet Township Public Schools **Katie Mazzacchulli** Hazlet Township Public Schools	**Personalized Pacing within the Math Class**	4-5
MAC 202	Allowing students the opportunity to move through math at their own pace opens the door to motivation, achievement, and success. Providing instruction through mini lessons, conferencing with students, and monitoring progress allows the teacher to facilitate rather than instruct. Come check out how to transform your classroom... tools, tips, & tricks! *Focus: Make sense of problems and persevere in solving them.*	

Rania Saba Franklin Township Public School District **Alexandra Thomas** Franklin Township Public School District	**Culturally Responsive Mathematics Teaching**	3-5
MAC 203	This session highlights the interplay between cultural factors and the acquisition of mathematical knowledge. Mathematics has long been regarded and taught as a culturally neutral content area. When teachers neglect to leverage students' cultures, they miss the opportunity to create authentic learning. This is true in the mathematics classroom where teachers expect all learners including those from culturally diverse backgrounds to conform to mainstream cultural norms in mathematical thinking and problem-solving. This expectation places these students in a challenging position as they attempt to navigate academic demands and cultural assimilation, potentially hindering their success in mathematics. The presentation will emphasize the importance of acknowledging and integrating students' cultural backgrounds into mathematics instruction to create more inclusive and effective learning environments that support the diverse needs of all learners. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively.,Model with mathematics.*	
Nicole Williams Bernards Township School District **Kristine Karnich** Bernards Township School District	**But, Why Does it Work?**	3-5
MAC 208	But, Why DOES it work? Mathematics is full of “tricks”. Some of us love teaching tricks to students and some are firmly against them. What if we found a way to do both??!! In this session we will be diving deep into the Math Practice Standard 7 and 8. We will look at practical ways to get our students to notice patterns, figure out why they are happening and generalize a rule that will always work. This is the foundation for algebra and is the inherent beauty behind the “tricks”. *Focus: Look for and make use of structure., Look for and express regularity in repeated reasoning.*	

Kelly Frazee North Brunswick Township Schools **Dawn Bauer** North Brunswick Township Schools	• **Building your multiplication and division strategies toolbox!**	3-5
MAC 209	To memorize or not to memorize? There is much debate about what's best when it comes to learning multiplication facts. While memorizing certainly helps some students to know their facts, it does not build a conceptual understanding of multiplication that can then be applied to other skills like division and fractions. In this session, you will learn how to teach students how to find and use efficient strategies for multiplication. We will investigate examples of student work and discuss how to move students from concrete understanding to more abstract and efficient strategies. You'll walk away with instructional strategies you can utilize right away! *Focus: Look for and make use of structure.*	
Francesca LoCascio Franklin Lakes Public Schools **Robin Smolenski** Franklin Lakes Public Schools	**Grit & Grid: Enhancing Mathematical Practices**	3-5
MAC 210	In today's educational landscape, fostering mathematical proficiency extends beyond merely solving equations. It's about nurturing a mindset of inquiry, problem-solving, and critical thinking. Educators recognize the importance of cultivating these skills early on, laying a solid foundation for our students' mathematical journey. In this presentation, we explore how leveraging students' perseverance and the use of graph paper can serve as a powerful tool in enhancing the Standards for Mathematical Practice in Grades 3-5. The strategies outlined, in conjunction with the Standards for Mathematical Practices, can be utilized across many of the major content domains, including multiplication, fractions, and geometry. In SMP 1, "Make sense of problems and persevere in solving them" serves as a cornerstone for developing problem-solving skills, fostering resilience, and promoting a growth mindset among students. Integrating graph paper into our instructional practice fosters a holistic approach to mathematical learning. By leveraging the visual and structural properties of graph paper, we empower students to become confident, proficient mathematical thinkers who are equipped to tackle real-world challenges with creativity and insight. When students foster deeper conceptual understanding and critical thinking skills, rather than resorting to rote memorization or formulaic approaches, they learn to engage in sense-making, exploring multiple strategies and perspectives to arrive at solutions. This process not only enhances their mathematical fluency but also nurtures a deeper appreciation for the interconnectedness of mathematical concepts and standards for mathematical practices. *Focus: Make sense of problems and persevere in solving them., Model with mathematics. , Look for and make use of structure.*	

Brittany Seeley NJCIE	**Enhancing Executive Functioning and Math Engagement for Students with Disabilities in Grades K-2**	K-2
MAC 211	This burst will focus on enhancing the educational experience for K-2 students with disabilities by improving executive functioning skills and math engagement. Provide resources and ideas to develop essential cognitive skills and create engaging math activities to foster inclusivity and academic success for all students. *Focus: Make sense of problems and persevere in solving them.*	
Sara Jutcovich NJCIE	**Planning for Success: Specially Designed Instruction in Mathematics**	K-5
MAC 212	In this interactive presentation, teachers will learn about specially designed instruction (SDI) and how to effectively plan and tailor instruction for students with disabilities (IDEA Section 300.39) We will explore SDI, emphasizing the adaptation of content, methodology, and instructional delivery, while focusing on research-based strategies and high leverage practices to support students in mathematics. We will examine resources and materials to deepen our understanding. Teachers will have time to reflect on their current students and what SDI will work best for their students. In this presentation, teachers will learn how SDI can be planned and implemented in an inclusive setting so all students can benefit and thrive. Teachers will leave with a strong understanding of SDI, new resources, and effective planning strategies. *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Look for and make use of structure*	
Kiera Kulaga East Windsor Public Schools	**Number Talks: Engaging Students Through Mathematical Discussions**	3-5
MAC 214	This session will introduce Number Talks including what they are, how to onboard them in a classroom, and why they are beneficial. Participants will be encouraged to engage in lively mathematical discussions and brainstorm how to best get students to think and reason like a mathematician. This session is geared towards elementary and middle school mathematics, but can be utilized in any grade level. The presenter will not only introduce Number Talks, but also showcase how to encourage students to have accountable mathematical discourse in alignment with NCTM's 8 Mathematical Practices. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others.*	

60 minute Hands-on Sessions		
10:30 - 11:30 AM		
Mina Sedaghatjou Rowan University	**Fusing CS, CT, and AI Through Mathematics in the K-2 Classroom: A New Paradigm for Elementary Education**	K-2
SLC 103	In this session, we will dive into the dynamic interplay between mathematics and computer science (CS), with a special focus on how to weave artificial intelligence (AI) concepts into the curriculum for young students, specifically those in grades K-2. This engaging and participatory workshop is designed to shed light on innovative methods and curriculum-aligned challenges that encourage mathematical reasoning while also advancing CS and digital literacy skills. Attendees will actively engage in group activities that are crafted to enhance their comprehension of how mathematics underpins computational thinking and AI concepts. The workshop will cover essential mathematical topics suitable for early learners, such as counting, recognizing patterns, and employing problem-solving tactics, all tailored to meet their developmental stages. Through the use of educational platforms like Dash and Scratch, participants will acquire hands-on experience in seamlessly integrating technology into math teaching, thereby boosting student participation and ensuring equitable access to learning resources. This workshop is in line with NJ learning standards. By the end of this session, educators will be equipped with innovative ideas and approaches to enrich their lesson plans, enabling them to foster a more profound connection between mathematics, CS, and digital literacy in their K-2 classrooms. *Focus: Make sense of problems and persevere in solving them., Construct viable arguments and critique the reasoning of others., Model with mathematics., Use appropriate tools strategically.*	
Frank Gardella Hunter College	**Fractional Concepts and Skills: From Models to Words to Symbols**	3-5
SLC 104	Fractional concepts and skills remain one of the most difficult areas of mathematics for students at many grade levels. The key to changing this is to have students begin to study new fractional concepts and skills in a structure that has them initially address at their level of understanding, that is with models. In this session, participants will create linear models to develop concepts and skills. They will then work to develop these ideas by describing them in words leading to finally establishing the symbolism of fractions. This session has participants learn how to address fractions, no matter the concept or skill and no matter the grade level standards being addressed, along a continuum of "models, words and then symbols." The major idea here not seen in many programs is the use of fractional words such as fourths, sixths, etc. to address the same concepts and skills for which students will use symbols as their understanding of the fractional concepts and skills grows through the grades. *Focus: Model with mathematics., Use appropriate tools strategically*.	

Angelina Rodriguez Livingston Public Schools **Laura Dugan** Livingston Public Schools	**The Approach, The Tools, The Depth. . .The Instructional Pathway of CPA through Subtraction** **Slide Deck:** **The Approach, The Tools, The Depth. . . The Instructional ..**	K-2
SLC 105	Join us to focus on the practices of "model with mathematics", "use appropriate tools strategically", and "make sense of problems and persevere in solving them". Together, we will unpack the concrete, pictorial, abstract (CPA) approach to help students make connections and develop conceptual understandings of subtraction with regrouping. This hands-on approach helps students deepen their level of understanding that goes beyond the rote process of subtraction and fosters an experience that uses tools, precise language, and reasoning to truly master the skill. The session will begin with a discussion around common student misconceptions that often hinder mastery of subtraction. Throughout the session, participants will engage in real world problems in order to experience subtraction in context. We will build a foundation with the concrete stage of subtraction through number bonds, base ten blocks and place value charts. Participants will transition to the pictorial stage where they will use pictures or visuals to take the place of concrete materials. This approach will enhance the learners ability to visualize problems and model their solutions while explaining their reasoning and strengthening their conceptual understanding. Finally, we will conclude with using connections from the concrete and pictorial stages to support the abstract stage by using symbols to communicate mastery. Attendees will take part in a hands-on approach to subtraction that they can experience and then take back to their classrooms to support their learners. While the focus of this workshop is subtraction through the lens of CPA, participants will develop a mathematical mindset that encourages them to implement the CPA approach in all concepts of any grade level, and realize that through the use of CPA the mathematical practices are integrated naturally. *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Use appropriate tools strategically.*	
Hollie Hartford AIE Connect	**Synergizing Literacy and Numeracy: Bridging the Gap Between Reading Skills and Math Proficiency**	PreK-2
SLC 106	What is the connection between reading and math? Many tasks students encounter are in the form of word problems. In this session, we will explore routines to deepen knowledge, vocabulary, and language skills so students can make sense of the text they encounter. Learn strategies that can enhance any math lesson, creating opportunities for all students to access grade level math and beyond. *Focus: Make sense of problems and persevere in solving them., Attend to precision.*	

Thelma Perry TNTP **Meredith Kafah** TNTP	**SMP 3 – Moving Beyond Accountable Talk Routines**	
SLC 107	Asking students to use Accountable Talk moves to explain their solutions is the beginning of getting students to demonstrate Standard for Mathematics Practice 3. In this session, participants will deepen their understanding of the mathematical practice while simultaneously enhancing their ability to strategically create learning environments that empower students to utilize mathematical evidence and conceptual inquiry to become more proficient math students. Session Outcomes: • Know – Participants will know how the Standards for Mathematical Practice support teacher and learning of the Mathematical Content Standards. • Understand – Participants will understand how to create a learning environment that empowers students to develop conceptually evidenced-based arguments and pose critical questions that help them clarify and improve their own mathematical understandings, justifications, and explanations. • Do – Participants will examine practical instructional strategies that can be quickly and easily enacted to promote the development of SMP 3. *Focus: Construct viable arguments and critique the reasoning of others.*	
Agnes Azzolino mathnstuff.com Middlesex County College	**MATH GAMES (Concrete & Digital) FOR ADULT AND CHILD (Ages 2 - 7)** **https://www.mathnstuff.com/papers/paprgif/MATH.GAMES.AMTNJ.(c)10.25.24.A.Azzolino.pdf**	K-2
SLC 208	At an AMTNJ meeting 40 years ago, my 6-year-old and I presented our math games. A man in the audience requested I write a book. Written by 1985, posted free and downloadable on the net by 1993, digital in the early 2000s, today we use both concrete and digital versions. Sample/play representation & counting games, including the 100s board for group bingo and computation; travel games; card games like "Beat the 10s," "Done," and "For 2, 3, or 4;" board and geometry games (including "Find the Circle," and "I Want You to Draw"). Other concrete and digital manipulatives for fraction, decimal, whole, and integer computation will be mentioned and we'll end singing. Come play. *Focus: Reason abstractly and quantitatively., Model with mathematics.*	

Debra Gulick Rutgers University	**Algebraic Thinking for our Youngest Students**	PreK-2
SLC 216	Teachers of students in grades K-2 have the opportunity to introduce young learners to the joy of algebraic thinking. It's through algebraic thinking that students move from being able to add 2 + 3 by modeling the fact with counters (or other concrete objects), to knowing that 2 + 3 is always 5, to being able to "see" why 2 + 3 is 5. The foundation for algebraic thinking is established in the K-2 classrooms when teachers ask, what comes next, what's missing, what's the pattern and more. Participants will learn how to reframe questions to complement their use of routines and manipulatives to strengthen students' ability to think algebraically and use these skills to understand and solve problems. Additionally, participants will understand the power of language to communicate mathematical thinking. *Focus: Reason abstractly and quantitatively.*	
Eric Milou Rowan University	**Engaging Students in True Problem Solving**	3-5
SLC 217	This session will provide examples where students are challenged to solve deeper problems using number sense. We will redefine problem solving with examples where no easy path to the solution is present and that challenge students' to think, reason and create. *Focus: Make sense of problems and persevere in solving them.*	
Rosemarie Chromey Paterson Public Schools **Veronica Moran** Paterson Public Schools	**Unleashing the Magic of the Mathematical Practices** **Unleashing the Magic of the Mathematical Practices**	3-5
SLC 218	This presentation invites 3-5 educators to explore the applications of mathematical practices in the classroom and discuss the reasons for the shift that has occurred from rote memorization to cultivating essential skills and habits of mind. We will discuss how Mathematical practices offer a framework that goes beyond mere calculation, emphasizing critical thinking, problem-solving, and reasoning abilities crucial for success in both academics and the real world. We will explore the eight mathematical practices outlined in the New Jersey Student Learning Standards, illustrating each principle with examples and interactive exercises. From making sense of problems to modeling with mathematics, participants will discover how these practices form the foundation of mathematical proficiency and promote a deeper conceptual understanding among students. Through practical demonstrations participants will gain an understanding of how to integrate these practices into their teaching repertoire and how to scaffold activities that encourage active engagement, collaboration, and perseverance in problem-solving. *Focus: Construct viable arguments and critique the reasoning of others., Model with*	

	mathematics.	
Nora Pettyjohn Hazlet Township Public Schools **Katie Mazzucchelli** Hazlet Township Public Schools	**MATH Rotations**	K-4
MAC 202	Get up and get moving! This rotational strategy will keep your kiddos engaged and moving throughout your math class. By integrating small-group instruction, hands-on learning, and technology, your students will have the opportunity to understand new skills like a pro! *Focus: Use appropriate tools strategically.*	
Kristin DeLorenzo Flemington-Raritan Regional School District **Christina Staikos** Flemington-Raritan Regional School District	**Ratio Tables for Multiplicative Thinking (3-5)**	3-5
MAC 203	Students in grades 3-5 can use ratio tables to model problem situations and show mathematical reasoning. Learn how this powerful tool can help students multiply and divide, from learning basic facts to operations with fractions and decimals. We will practice using ratio tables to build fact strategies, highlight the properties of operations, and solve multiplication and division word problems. We will show how ratio tables help students develop generalizable computational strategies that they can use throughout grades three through five, and beyond. *Focus: Model with mathematics., Look for and make use of structure.*	
Kristine Venneman The Math Viking	**Engaging Ways to Build Real Place Value Understanding**	PreK-2
MAC 206	Develop this essential understanding with rich counting tasks, playful composing and decomposing games, and lots of thinking activities. Consider that many little ones are not buying into number lines, charts and place value blocks as we had hoped. These tools are incredibly helpful, yet they require repeated exploration and explicit reinforcement. Level up your math game in one hour with two whole class lessons, three interactive games and four hands-on games for your classroom. Participants will leave with games, activities, links and a new outlook on unitizing and place value. The session is also appropriate for upper elementary support teachers and interventionists and will include ways of enriching your most confident	

	students. *Bring a device if possible. *Focus: Model with mathematics, Use appropriate tools strategically, Attend to precision*	
Jessica Ciandella Hazlet Township Public Schools	**Implementing Math Talk in the Classroom**	3-5
MAC 208	This presentation is geared towards elementary teachers who are looking to change something up in the math classroom. This session will explore the concept of Math Talk within the classroom, its positive effects on students' participation and understanding of math concepts as well as how to get started in your own classroom! *Focus: Make sense of problems and persevere in solving them., Construct viable arguments and critique the reasoning of others.*	
Abby Friend Middletown Township Public Schools **Melanie Tindall** Middletown Township Public Schools	**Rocking the Rekenreks**	PreK-2
MAC 209	Utilizing rekenreks in K-2 mathematics to develop and strengthen math concepts. Attendees will learn how to use the rekenrek to strengthen student understanding and acquire new strategies to take back to their classrooms. Standards addressed: K.CC.B, K.CC.C, K.OA.A, 1.OA.A, 1.OA.B, 1.OA.C, 1.NBT.A, 2.OA.A, 2.OA.B, 2.OA.C *Focus:* Make sense of problems and persevere in solving them, Reason abstractly and quantitatively, Use appropriate tools strategically, Look for and make use of structure.	
Kristen McIntyre Chesterfield Township	**Exploring the Concrete, Representational, Abstract Progression of Math Strategies for Subtraction**	K-2
MAC 210	This session will dive into the Concrete, Representational, Abstract (CRA) progression of teaching subtraction in mathematics. Through this progression, learners transition from manipulating physical objects (concrete) to using visual aids (representational) and finally to working with numbers and symbols (abstract). By understanding and implementing this progression, educators can provide students with a solid foundation in subtraction, fostering deeper comprehension and retention of mathematical concepts leading to computational fluency. This presentation will explore various subtraction strategies and view students' work to discuss the CRA progression and differentiation in instruction. *Focus: Reason abstractly and quantitatively, Model with mathematics, Use appropriate tools*	

	strategically, Attend to precision, Look for and make use of structure, Look for and express regularity in repeated reasoning.	
LeighAnn Leighton Brick Township School District **Danielle Ventrello** Brick Township School District	**Unlocking the Mathematical Mind: A Journey through Practices 2, 7, and 8**	K-5
MAC 211	Join us for an exploration into the integration of the Standards for Mathematical Practice in elementary mathematics classrooms. This session is designed to equip educators with actionable insights and effective strategies for incorporating these standards into their teaching practices. Participants will delve into the hierarchy of the standards, with a particular focus on SMP1: "Make sense of problems and persevere in solving them." Additionally, we will examine SMP2, SMP7, and SMP8, which emphasize abstract reasoning, identifying and utilizing patterns, and expressing regularity in reasoning. Through interactive activities, real-world examples, and collaborative discussions, attendees will uncover the essence of these key mathematical practices. Practical approaches for integrating SMP2, SMP7, and SMP8 into everyday teaching will be explored, along with insights into fostering a growth mindset and mathematical resilience among students. Attendees will also gain access to a range of resources and tools to support ongoing exploration and implementation of mathematical practices in the classroom. This session offers a unique opportunity for educators to deepen their understanding and enhance their teaching practices, ultimately empowering students to excel in mathematics with confidence and competence. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Look for and make use of structure., Look for and express regularity in repeated reasoning.*	
Sara Jutcovich NJCIE	**Planning for Success: Specially Designed Instruction in Mathematics**	K-2

MAC 212	In this interactive presentation, teachers will learn about specially designed instruction (SDI) and how to effectively plan and tailor instruction for students with disabilities (IDEA Section 300.39). We will explore SDI, emphasizing the adaptation of content, methodology, and instructional delivery, while focusing on research-based strategies and high leverage practices to support students in mathematics. We will examine resources, materials, and a case study to deepen our understanding. Teachers will have time to reflect on their current students and what SDI will work best for their students. In this presentation, teachers will learn how SDI can be planned and implemented in an inclusive setting so all students can benefit and thrive. Teachers will leave with a strong understanding of SDI, new resources, and effective planning strategies. *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Look for and make use of structure*	
Nicole Hirsch Glen Rock Public Schools **Michelle Della Fortuna** Glen Rock Public Schools	**Building Mathematical Practices: Utilizing Concrete-Semi-Concrete-Abstract Progression for Multi-Digit and Decimal Addition in Grades 3-5**	3-5
MAC 214	Are you looking for strategies to help your students develop their mathematical practices? In this session, teachers will examine how using a concrete, semi-concrete, abstract (C-S-A) progression can help develop students' ability to make sense of problems and reason abstractly and quantitatively. We will explore how the C-S-A progression can be used to support students as they develop multi-digit addition and decimal addition fluency across grades 3-5 (3.NBT.A.3; 4.NBT.B.4; 5.NBT.B.7). Specifically, participants will learn about how base-10 blocks can be used in upper elementary to support students' mathematical thinking and help students develop a deeper conceptual understanding of multi-digit and decimal addition concepts. Participants will also have time to explore how these tools can be used to enhance students' knowledge of other upper elementary content standards. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively.*	

Optional Partner Sessions
11:45 AM - 12:30 PM

imagine learning

Fluency and Fun K-5
Featuring Sara Baranauskas
SLC - 217

Imagine Learning, an Illustrative Mathematics (IM) Certified Partner and a Proud Partner of AMTNJ, will be hosting the session below

Sara Baranauskas has dedicated 27 years to the field of education, with experience spanning elementary teaching in grades 2, 3, 5, and 6, as well as serving as a K-12 Math Coordinator in Connecticut. She is the author of the Grade 1 Illustrative Mathematics curriculum and has delivered Professional Learning to educators nationwide, focusing on problem-based learning and effective instruction of IM.

Currently, Sara serves as a K-5 Senior Curriculum Specialist at Imagine Learning. She is also a recognized speaker, having presented at NCSM, NCTM, and various state and regional conferences, including the Associated Teachers of Mathematics in Connecticut and New England.

Fluency and Fun K-5
How can teachers integrate fun and student engagement into developing mathematical fluency and concepts, both inside and out of the classroom? In this session, teachers will explore the use of Imagine IM center kits and digital centers to help meet this goal. Come and get a glimpse at Imagine Learning's new and upcoming K-5 Center Kits as well as digital centers and discover how these will make your students' mathematics learning magical.

Focus: Reason abstractly and quantitatively, Attend to precision, Look for and make use of structure

EAI EDUCATION

Algebraic Reasoning K-5
Featuring Pamela Smith

SLC - 216

EAI Education, a Proud Partner of AMTNJ,
will be hosting the session below

Pamela Smith served as Director of Mathematics for Duncanville ISD and Carrollton-Farmers Branch ISD, both large suburban school districts in Texas. After orchestrating many successful initiatives and partnerships for the district, she went on to partner with some of the most challenging school districts and schools in the country as a National Mathematics Consultant with decades of successful experience in the teaching and learning of mathematics. Pamela

regularly attends national training sessions to showcase new mathematics resources and classroom manipulatives, which she has co-developed and written through EAI Education.

She is a frequent presenter at national conferences including NCSM, NCTM, ASCD, and many state conferences including the Conference for the Advancement of Mathematics Teaching(CAMT) - Texas, Florida Council of Teachers of Mathematics (FCTM), Georgia Council of Teachers of Mathematics (GCTM), California Mathematics Council (CMC) North and South.

Algebraic Odyssey: A Journey of Discovery and Reasoning
Participants will be actively involved in learning how to help students acquire Algebraic Reasoning by discovering expressions, equations, using properties as strategies, number patterns and relationships, and so many more concepts using hands-on Manipulatives.

Focus: Model with mathematics, Use appropriate tools strategically.

innovamat

Developmentally Appropriate Pre-K Math Learning: Featuring Judith Fabrega and Manuel Méndez

SLC - 218

Innovamat, a Proud Partner of AMTNJ,
will be hosting the session below

Judith Fabrega is the Early Childhood Lead at Innovamat. She holds a degree in Early Childhood Education from the Universidad Autónoma de Barcelona (UAB) and a PhD in Teaching of Mathematics and Experimental Sciences from the University of Florida (UF), with a specialization in Curriculum and Instruction.

Manuel Méndez leads partnerships with our US districts. After having supported schools globally in implementing research-based math curriculum for early childhood. He is an engineer turned math geek after doing a Masters at MIT.

Developmentally Appropriate Pre-K Math Learning
Research has shown that Pre-K is crucial in shaping children's math potential, impacting their academic and lifelong success. However, many questions remain. What does developmentally appropriate learning look like? How can we align Pre-K with K standards without sacrificing playfulness and exploration?

Join us in this hands-on session where we will experience how playfulness and mathematical rigor can be merged together to foster deep conceptual understanding and mathematical thinking since PreK (and earlier).

Focus: Make sense of problems and persevere in solving them, Reason abstractly and quantitatively, Look for and make use of structure, Look for and express regularity in repeated reasoning

Brown Bag Lunch (Provided)

12:30 - 1:15 PM

Jersey Blues Dining Room

Optional Grade Level Collaboratives

1:15 - 2:00 PM

Come join us for an opportunity to collaborate with grade level counterparts from around the state. Here you will have time to discuss classroom practices, changes to standards, and time to network with colleagues. Sharing Session Notes

PreK MAC 202 Moderator: Kristine Venneman	**Grade 4** MAC 210 Moderator: Phyllis Hillwig	**District-Level Administrator Last Names A-M** SLC 103 Moderator: Michelle Della Fortuna
Kinder MAC 203 Moderator: Kara Teehan	**Grade 5** MAC 211 Moderator: Kiera Kulaga	**District-Level Administrator Last Names N-Z** SLC 208 Moderator: Jen Martins

Grade 1 MAC 206 Moderator: Emily Ruggiero	**Special Education** SLC 104 Moderator: Michele Gardner	**Coach** **Last Names A-L** MAC 212 Moderator: Debra Gulick
Grade 2 MAC 208 Moderator: Kristen McIntyre	**Interventionist** **Last Names A-K** SLC 106 Moderator: Dana Wallock	**Coach** **Last Names M-Z** MAC 214 Moderator: Josh Raposo
Grade 3 MAC 209 Moderator: Francis Gardella	**Interventionist** **Last Names L-Z** SLC 107 Moderator: Nicole Williams	**Building-Level Administrator** SLC 105 Moderator: Christa Mawn

60 minute Hands-on Sessions		
2:15 - 3:15 PM		
Michelle Pancorvo Heinemann ***VENDOR SESSION***	**Inquiry-Based Learning at its Best!**	K-5
SLC 103	Inquiry-based learning is a student-centered approach to teaching and learning math that emphasizes active exploration, discovery, and problem-solving. Come join us to explore these crucial components of a math classroom including: Student-centered Approach - Students are encouraged to ask questions, investigate mathematical concepts, make their own discoveries Teacher-focused Facilitation -Teachers facilitate and guide, helping students develop critical thinking skills Collaborative, Community-Building -Working together, students learn from each other, fostering understanding and cultivating an active and engaging learning environment *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Use appropriate tools strategically.*	
Jay Schiffman Rowan University (retired)	**Patterns -The Heart of Mathematics** **Patterns-The Heart of Mathematics**	K-5
SLC 104	This hands-on workshop serves to engage participants in several rich problems that comport to the Common Core Curriculum Standard For Mathematical Practice entitled Look For and Make Use of Structure. The underlying theme for this standard is to generate patterns and form conjectures based on the analysis of such patterns. Among the activities participants will engage in include determining the next five terms in a number sequence which may be arithmetic, geometric, or recursive, a number puzzle which asks for a conclusion in which a number is selected and one applies several arithmetic operations. We determine if the number selected really matters with regards to the final conclusion generated. Additional activities include examining patterns in a calendar, finding the day of the week in the future if a given day is given in addition to completing a table consisting of figurate numbers such as square, triangular, tetrahedral and pentagonal numbers. We culminate our activities by furnishing several examples in which a pattern breaks and the conclusion one believes might happen actually does not. Hence the idea of a counterexample is introduced. Please join us to view palatable activities comporting to Mathematical Practice 7 that are engaging and fun. *Focus: Look for and make use of structure.*	

Angelina Rodriguez Livingston Public Schools **Laura Dugan** Livingston Public Schools	**The Approach, The Tools, The Depth. . .The Instructional Pathway of CPA through Multiplication** **Slides:** **The Approach, The Tools, The Depth. . . The Instruct...**	3-5
SLC 105	Join us to focus on the practices of "model with mathematics", "use appropriate tools strategically", and "make sense of problems and persevere in solving them". Together, we will unpack the concrete, pictorial, abstract (CPA) approach to help students make connections and develop conceptual understandings of multiplication. This hands-on approach helps students deepen their level of understanding that goes beyond the rote process of multiplication and fosters an experience that uses tools, precise language, and reasoning to truly master the skill. The session will begin with a discussion around common student misconceptions that often hinder mastery of multiplication. Throughout the session, participants will engage in real world problems in order to experience multiplication in context. We will build a foundation with the concrete stage of multiplication through number bonds, base ten blocks and place value charts. Participants will transition to the pictorial stage where they will use pictures or visuals to take the place of concrete materials. This approach will enhance the learners ability to visualize problems and model their solutions while explaining their reasoning and strengthening their conceptual understanding. Finally, we will conclude with using connections from the concrete and pictorial stages to support the abstract stage by using symbols to communicate mastery. Attendees will take part in a hands-on approach to multiplication that they can experience and then take back to their classrooms to support their learners. While the focus of this workshop is multiplication through the lens of CPA, participants will develop a mathematical mindset that encourages them to implement the CPA approach in all concepts of any grade level, and realize that through the use of CPA the mathematical practices are integrated naturally. *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Use appropriate tools strategically.*	
Hollie Hartford AIE Connect	**Synergizing Literacy and Numeracy: Bridging the Gap Between Reading Skills and Math Proficiency**	K-2
SLC 106	What is the connection between reading and math? Many tasks students encounter are in the form of word problems. In this session, we will explore routines to deepen knowledge, vocabulary, and language skills so students can make sense of the text they encounter. Learn strategies that can enhance any math lesson, creating opportunities for all students to access grade level math and beyond. *Focus: Make sense of problems and persevere in solving them., Attend to precision.*	

Gregory Trieste Amplify ***VENDOR SESSION***	**Unlocking the Joy of Math for Neurodiverse Students**	3-5
SLC 107	Students with learning differences can bring unique perspectives and skillsets to the classroom, which can help create a more well-rounded educational experience for all. This session will provide math teachers and administrators with best practices to effectively facilitate math learning with diverse learners and students with neuro-diversities. Through interactive activities, participants will gain an understanding of creating learning environments that are inclusive of all types of learners while also exploring tools for overcoming potential challenges. The goal is for educators to leave this session feeling confident in their ability to support these uniquely gifted learners in achieving success in math. The primary focus of the session will be grades K-5, however all are welcome. *Focus: Model with mathematics.*	
Andrew Ziobro Roselle Borough Schools **Rosanne DiMare** Roselle Borough Schools	**Helping students to construct viable arguments by creating an environment that fosters student discourse**	3-5
SLC 208	**SLIDES**: https://docs.google.com/presentation/u/1/d/1IdXZ2GsvaF_4gHC9NoozTjWvu26rRUslmoDfL-H6NSw/copy Creating discourse within the time constraints of the classroom can be difficult. We will examine different strategies that can be used to create and build communities of discourse in the mathematics classroom. Learn how to create opportunities for student discussion and develop strategies to encourage students to construct and explain their reasoning. *Focus: Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others.*	
Pamela Smith EAI Education ***PARTNER SESSION***	**Numeracy and Literacy: How Are These Connected?**	3-5
SLC 216	Participants will be actively engaged in connecting the parts of speech to solving mathematical word problems. Modeling with Bar Models, transferring to representational strip diagrams, connecting to equations, and using various strategies to find correct answers will be the focus. *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Look for and make use of structure.*	

Kevin Dykema Mattawan Consolidated Schools / NCTM / hand2mind ***PARTNER SESSION***	**Successfully Developing Fluency**	3-5
SLC 217	Having students develop number fluency is critical, but how can we do this? Come explore ways to integrate number talks and number strings to develop this essential skill and improve student efficiency, accuracy, and flexibility. See how manipulatives can be used to further the development. *Focus: Construct viable arguments and critique the reasoning of others., Use appropriate tools strategically.*	
Albert Vilalta Innovamat **Manual Méndez** Innovamat ***PARTNER SESSION***	**Is it Possible to Unlock Mathematical Practices in Everyday Instruction?**	PreK-5
SLC 218	We are often told that content standards and mathematical practices are at odds. It is not possible to hit all content standards if we want to prioritize critical thinking or problem solving. In this hands-on Math activity workshop, we'll dive deep into the idea of challenge and productive struggle as powerful tools for learning. We will discuss how building knowledge through inquiry and investigation results in deeper conceptual understanding, as well as the development of the Mathematical Practices. We'll also discuss how to make lessons more relevant, and shatter the misconception that traditional concepts cannot sustain math engagement. Bring your math brains with you, and come ready to wear the student and teacher hat. You will leave the session with refreshed ideas, strategies and tools to ensure that engagement, deep conceptual understanding and the mathematical practices are present in everyday instruction. *Focus: Make sense of problems and persevere in solving them, Model with mathematics, Use appropriate tools strategically, Look for and make use of structure.*	
Emily Ruggiero Hazlet Township Public Schools	**Flip Flopping Into Math**	1-2

MAC 202	The presentation "Flip Flopping into Math" will provide teachers with the resources and tools to implement this rotation technique into their own classrooms. Teachers will not only get to see how this technique is beneficial for creating student independence but also give teachers the time to provide small group instruction. Teachers will get to ask questions, see the rotation in action, and create hands-on games to be used within their classroom. *Focus: Model with mathematics., Use appropriate tools strategically., Attend to precision.*	
Marie Besnaham West Windsor Plainsboro **Rachel Banziger** West Windsor Plainsboro	**Equity in Mathematics: Number Sense Routines**	K-5

MAC 203	The use of number sense routines helps build classroom communities that allow all students the opportunity to show off their math abilities. Number Sense routines offer multiple entry points for all students and foster interactive discussions among peers. Math is about understanding relationships and patterns and making sense of the world around us. Number sense routines are a powerful tool for developing a deep and intuitive understanding of numbers, paving the way for mathematical success. These routines provide a low-stress, enjoyable way to engage with math and help students build confidence in their abilities. They allow all students to engage creatively with visual representations, numbers, and mathematical concepts, fostering a collaborative learning community. Our math classes aim to nurture lifelong learners by empowering students to take risks and share their thinking with their peers. This approach allows the entire class to learn from others and encourages students to apply their knowledge independently when solving problems. By incorporating number sense routines, we not only ensure that all students can think creatively and engage in discussions about mathematical ideas, but also instill a problem-solving mindset. These routines encourage students to explore and share various perspectives when problem-solving, moving beyond rote memorization to thinking flexibly with numbers. Number sense routines incorporate most of the mathematical standards. They prompt students to participate in discussions, make sense of problems, reason abstractly, and effectively communicate their problem-solving strategies to others, thereby preparing them for real-world problem-solving and promoting a supportive accepting learning environment. *Focus: Make sense of problems and persevere in solving them., Construct viable arguments and critique the reasoning of others., Look for and make use of structure.*	
Alaina Chip Belleville Public Schools **Annamaria Contella** Belleville Public Schools	**Encouraging Thinkers in Your K-2 Math Classroom**	K-2

MAC 206	"Encouraging Thinkers in Your K-2 Math Classroom" addresses ways to specifically use aspects of Liljedahl's research in any math classroom. This presentation supports the 8 mathematical practices as well as other math standards, grades K-2. We have been challenging the status quo by using aspects of his research to build a thinking classroom community and foster perseverance in our students. We will directly share our tried and true ways of helping build a community of mathematicians at the elementary level. This presentation will include direct takeaways such as an accountable talk anchoring activity, a lesson to work through what frustration looks like, and ideas that teachers can use the next day in their lessons to create community. We will demonstrate a rich math task and share resources. Participants will be up and moving about, experiencing these best practices first hand. We will share what we have found works in our classrooms K-2. As experienced educators, we are well versed in teaching our students how to speak mathematics and how to engage with other learners to problem solve. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others., Model with mathematics., Use appropriate tools strategically.*	
Mala Maharana Sayreville Public Schools	**Simplifying Data Literacy: Standards-Based Skills for 3-5**	3-5
MAC 208	Join us for an engaging and interactive session focused on enhancing data literacy skills in grades 2 through 5 mathematics education. In this session, we will explore the fundamental concepts of data literacy, including the ability to reason with and about data, make informed decisions, ask questions, and use appropriate reasoning. Specifically tailored for educators working with grades 2 through 5 students, we will delve into the New Jersey Content Emphases 2023 Math Standards for data literacy, highlighting key standards such as 2.DL.A.1 and 3.DL.A.1 for grades 2 and 3, and 4.DL.A.1 and 5.DL.A.4 for grades 4 and 5. Through hands-on activities, collaborative inquiry, and real-world applications, attendees will gain practical strategies for unpacking and teaching these standards effectively in their classrooms. Come ready to explore interactive tools, analyze sample datasets, and engage in peer discussions as we work together to empower students to become proficient data users and decision-makers, preparing them for success in an increasingly data-driven world. *Focus: Make sense of problems and persevere in solving them., Model with mathematics., Use appropriate tools strategically., Attend to precision.*	

Kathy Mikalsen Flemington Raritan School District **Jen Furman** Montgomery Township School District	**Number Strings and Other Rich Math Tasks** **Slides:** **Number Strings and Other Rich Math Tasks - AMTN...**	K-2
MAC 209	Number Strings and other Rich Math Tasks provide teachers with valuable insight into how their students are thinking and reasoning mathematically. When used intentionally, they give students opportunities to look for patterns, practice dialogue and construct arguments while respectively critiquing others. Students get to make sense of complex ideas and use flexible models to communicate their thinking. This session will address ways to use Number Strings and Rich Math Tasks with young learners in grades K-3. Teachers will have the chance to experience both of these strategies. We will also provide you with resources for finding appropriate strings and tasks, and tools and so that you can create your own. *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others., Model with mathematics., Attend to precision., Look for and make use of structure., Look for and express regularity in repeated reasoning.*	
Michele Gardner NJ Coalition Inclusive Education	**Leveraging Station-Based Teaching for Inclusive Math Instruction**	PreK-2
MAC 210	In this session, participants will learn how station-based teaching can enhance mathematics instruction for early childhood learners. Discussion will cover the co-teaching models, how small group models enhance opportunities for specially designed instruction and ways in which educators can enhance teaching/learning particularly when there are two educators present in the classroom (co-teaching or otherwise). *Focus: Make sense of problems and persevere in solving them.*	

Cassidy Alia Howell Township Public Schools	**Building Math Minds: The importance of establishing critical thinking, problem solving, and number sense skills from an early age**	PreK-2
MAC 214	https://docs.google.com/presentation/d/14yOyWOLpQkypqQyrFtfW8_MYiCep3Ro2Cxgk1VFCDgk/edit?usp=sharing This session will focus on the importance of building mathematical minds from a young age by establishing a strong basis in skill areas such as critical thinking, problem solving, and number sense. Practice in these skill areas can be done at any age, but are especially important to target in the primary and early elementary years for a more substantial impact. When given the right tools and guidance, even the most resistant, "anti-math" students can learn to love math and become independent thinkers! In this session, educators will be able to learn the importance of establishing a math mind at an early age, gain insight into how to begin using practices that will strengthen these skills in the classroom, and acquire a plethora of helpful resources and become proficient in using them. Some resources include math talks, digital math apps and websites, center based activities, STEM challenges, whole group games, and more! Educators will experience both teaching and learning in the areas of critical thinking, problem solving, and number sense to obtain both the student and teacher perspective on the topic. This session will cover the mathematical practices of "Make sense of problems and persevere in solving them", "Reason abstractly and quantitatively", "Construct viable arguments and critique the reasoning of others", and "Model with mathematics" as well as building a basis to begin working towards many content standards across early grade levels. This hands-on experience will leave teachers empowered to facilitate students on their journey to being independent math thinkers! *Focus: Make sense of problems and persevere in solving them., Reason abstractly and quantitatively., Construct viable arguments and critique the reasoning of others., Model with mathematics*	

Prizes

3:15 - 3:30 PM

SLC - Lower Level

Outside Twin Lights I and II

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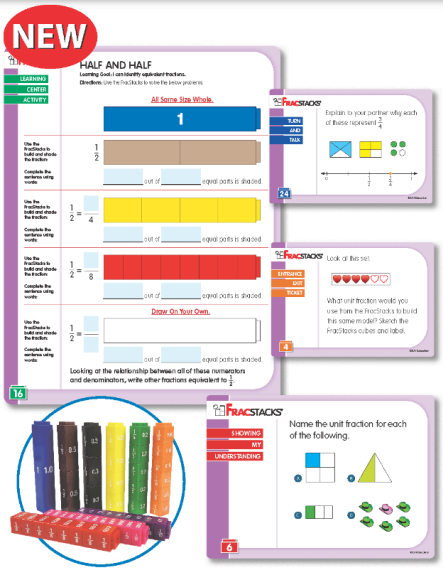

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Is it possible to unlock Mathematical Practices in everyday instruction?
2:15 PM - 3:15 PM | MAC 209 | K5
Albert Vilalta, PhD, Math Education Specialist, Elementary

Developmentally Appropriate Pre-K Math Learning
11:45 AM - 12:30 PM | SLC - 217 | PreK
Judith Fabrega, PhD, Math Education Specialist, Early Childhood

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Table 9
For rich activities and discover a complete **solution for math success in the classroom**

AMTNJ
ASSOCIATION OF MATHEMATICS TEACHERS OF NEW JERSEY

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

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Certificates will be emailed
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