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PRESIDENT'S MESSAGE

Dear NJ Teachers of Mathematics,

During the recent Regional Caucus at NCTM, we explored the important distinction between "mathematics teachers" and "teachers of mathematics." The former implies a more subject-driven focus, while the latter acknowledges all educators who guide students in learning mathematics, whether for one period a day or all day, every day. AMTNJ has traditionally used the term "mathematics teachers" (as I did in my President's message in the last newsletter), but I believe it's time we embrace "teachers of mathematics." Regardless of how much math you teach, you should feel that you belong in this organization and are fully supported by it.

With that in mind, we are excited to announce a new initiative aimed at connecting even more teachers of mathematics across New Jersey: the AMTNJ Ambassador Program. Our goal is to have two ambassadors— one PreK-5 and one 6-12—from each of New Jersey's 21 counties. These ambassadors will ensure local communities are represented and that educators from elementary, middle, and high schools have a voice.

This program offers educators a chance to be recognized for their dedication and to contribute to a broader vision of mathematics education. Ambassadors will play a key role in sharing the triumphs, needs, and interests they hear from their colleagues, helping us better support and uplift math teaching and learning across the state.

AMTNJ is committed to making mathematics education a source of joy, growth, and empowerment for all. By nominating a teacher of mathematics—or yourself!—you'll help us expand our reach and ensure that a diversity of voices is heard and championed.

We're eager to get this program rolling!

- If you work or are nominating a fellow educator who works in the Northern Counties (Bergen, Essex, Hudson, Morris, Passaic, Sussex, and Warren), please reach out to our Member-at-Large for the North, Amelia Bowers, at <u>abowers@tenafly.k12.nj.us</u>.
- If you work or are nominating a fellow educator who works in the Central Counties (Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Somerset, and Union), please contact our Teacher Outreach Coordinator, Pam Brett, at <u>outreach@amtnj.org</u>.
- If you work or are nominating a fellow educator who works in the Southern Counties (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem), please connect with our Member-at-Large for the South, Anne Paoletti, at <u>anne0112358@gmail.com</u>.

Thank you for helping us build a stronger, more inclusive mathematics education community across New Jersey. Your participation in the AMTNJ Ambassador Program will make a lasting impact by connecting educators, sharing valuable insights, and celebrating the incredible work being done in classrooms throughout the state. Together, we can empower and uplift teachers of mathematics at every level.

As we continue to build and support our math education community, we also invite you to join us at our Fall AMTNJ Conferences at Brookdale Community College in Lincroft:

- PreK-5 Conference: October 25, 2024
- 6-12 Conference: November 22, 2024

Both conferences will offer opportunities to learn from fellow teachers of mathematics, deepen your understanding of the eight Standards for Mathematical Practice, and collaborate with colleagues from across the state. For more details and registration, please visit <u>amtnj.org/conferences</u>. We hope to see you there!

We look forward to your nominations and to working alongside you as we strengthen math education in New Jersey!

With commitment and enthusiasm for all that we can achieve together, Cheryl Fricchione AMTNJ President



AMTNJ SCHOLARSHIP PROGRAM 2024 THE YEAR IN REVIEW

By Joan J. Vas, Executive Coordinator, AMTNJ Scholarship Program 2024 Newest Awardee – Vincent di Maio

Vincent di Maio is our 2024 awardee. In June, he graduated from Warren Hills Regional High School in Washington, New Jersey. He was nominated by AMTNJ member, Heather L. Apple, District Supervisor of Mathematics and Science. He has been awarded \$7,000 for his freshman year at The College of New Jersey. At the end of four years, he will receive a BS in Mathematics Education-Secondary. At the end of the fifth year, he will receive an MA in Special Education K-12. Vincent is exceptionally well qualified for this award. His high school transcript consisted of all A's for his entire career in high school. Since elementary school, Vincent has been helping his classmates with their mathematics homework. He says "I want to help students connect the dots, understand unique concepts, and learn new skills while feeling accomplished at the same time. I want to make a positive difference in other people's lives. Deciding to pursue a career in mathematics education is undoubtedly one of the best decisions of my life."

Vincent will be able to apply for a renewal scholarship for the next three years as long as he maintains good grades and continues in the mathematics education program. The amount of money is dependent upon available funds at the time of renewal.

2024 Renewal Awardees - Abigail Scheer & Annalise Caufield

Abigail Scheer has completed her second year at The College of New Jersey as a secondary mathematics education major. She says "all my professors are incredibly enthusiastic and passionate about their subjects, which makes every class enjoyable. This year I was recommended by a professor to tutor a student struggling with the math portion of the Praxis exam. This opportunity allowed me to refine my explanations and effectively communicate concepts to the student." Abigail was awarded \$6,500 for her third year at TCNJ.

Annalise Caufield has completed her first year at John Carroll University, Cleveland, Ohio. She is majoring in teaching mathematics. This first year, Annalise says, "I was able to gain experience in classrooms. Although I was only observing, it solidified my belief that math education is my calling. I am sure that math is the avenue through which I can impact students. Through my course in Probability, I learned that meticulous grading does not benefit anyone unless you take the time to explain why that answer is wrong." Annalise was awarded \$6,500 for her second year at John Carroll University.



I would like to recognize the AMTNJ Scholarship Selection Committee for 2023-2024 whose dedication and commitment to excellence in mathematics education has been the driving force in student selection. They are as follows: Past President John Kerrigan, Past President Lena Komitas, Julie Norflus-Good, Anna Maria Graff and Past President Joan J. Vas, Executive Coordinator. I would also like to thank our current AMTNJ President, Cheryl Fricchione, for her dedication and commitment to the AMTNJ Scholarship Program and providing generously in her budget for the awards. In total, this year, we have awarded \$20,000. This is the largest amount ever awarded in a single year.

REMEMBER: Any active member of AMTNJ, can nominate High School students who indicate that they have a desire to become mathematics educators and who are about to graduate from high school. The current application is available on the AMTNJ website, www.amtnj.org. **The deadline for submitting applications is APRIL 15, 2025.**

AMTNJ has a strong history of committing to improving the field of mathematic educators and supports the development of young people in this vocation. We are beginning our 30th year of implementing this program. Please join us by donating to the future of NJ math educators.

Your contributions in support of this program should be mailed to AMTNJ, P.O. Box 83, Adelphia, NJ 07710. Checks should be made payable to the AMTNJ Scholarship Program. Remember that AMTNJ is a tax-exempt organization, (501C3), and your contributions are fully tax deductible.

Thank you all for your continued support of this program, Joan



VOLUNTEER CALL: AMTNJ

AMTNJ is looking for a few volunteers to join our organization. We meet virtually a few times yearly and initiate various math events, programs, and publications. This is a great opportunity for teachers, consultants, admins, professors, retirees, etc. Please fill out the Google Form below if you are interested in volunteering.

Google Form- Click HERE!

Contact info@amtnj.org with questions!

Can't commit to the whole year? We also need volunteers at our 1-day conferences.



Studies have shown that non-permanent surfaces enhance the engagement of groups working out problems. But wouldn't it be nice if you didn't have to worry about sharing or filling up the one whiteboard in your office or classroom?

Calling All Math PD Presenters!

Fill out our quick and easy <u>donation form</u>, and we'll send you a free set of our innovative dry erase <u>Wipebook Flipcharts</u>! Please note, we need at least 3 weeks' notice to process your request in time for the event.

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Teacher quote



It is about "SEL"

Dr. Julie Norflus-Good AMTNJ Special Education Liaison Director of the Master of Arts in Special Education Ramapo College President of New Jersey Council for Exceptional Children jgood@ramapo.edu

As we are settling into the swing of the school year, I am sure you have already seen and or come upon the acronym with 1 consonant, 1 vowel and 1 consonant -SEL. Three simple and common letters, yet they are so complex! We define SEL as Social and Emotional learning (SEL), but really what is SEL?

In the simplest of terms SEL can be considered a soft skill. It is a mindset of who we are as a person and how we communicate. SEL learning is a process in which we learn how to apply social skills, attitudes, feelings, values and behaviors in a way that yields success in life. It further helps to reinforce the importance of executive functioning. This notion dates back to Vygotsky's theory of how an individual's cognitive development is based upon the various ways in which individuals socially interact with others. (Remember this from your basic introduction to education psychology class!) Since then, many others have contributed to this notion and even organizations such as the CASEL community were founded to help advance the knowledge and the implementation of SEL activities within the classroom setting.

Why is SEL important in our Mathematics Community? Let's think back to the Common Core Standards for Mathematics. The connection is real simple; applying mathematics to real world problems. In our mathematics classrooms we are encouraging collaborating and communicating with others. Thus, we are ultimately engaging in interpersonal and intrapersonal skills also known as SEL.

For those that are new to implementing SEL or are not sure how to get their feet wet, let's take baby steps and start slow. Teaching is not just about the content; it also involves developing the whole child. As educators we also want to cultivate friendships, colleagues, innovators, and good citizens. We also want to cultivate and foster a growth mindset in which we see mathematics as a challenge or a puzzle. Ultimately, we want our students to recognize that a mistake is not necessarily a failure, rather it is an opportunity to learn.

> Dr. Julie Norflus-Good is the AMTNJ, Special Education Liaison and the Director of Graduate Programs at Ramapo College.

It is about "SEL" (continued)

Start each class with a group challenge "real life" word problem that builds upon conversations. Provide the students with a serving size label from a bag of candy and ask them to calculate how many bags of carrots or candy (depending on how you want to motivate or model behavior) they will need to distribute for a class party. They then have to discuss their answers in a group. Then the groups compare their answers and write them on the board. It will be important to look at the multiple ways to get the answers and for them to actually discuss it with each other. Ask others to share their strategies on how they solved the problem. Make sure you point out that there are multiple ways to get to the same answer. The next day they can determine how many bottles of juice they will need to purchase for the same party.

Another simple activity could be to play non computer-generated games. This allows students to work on communicating in "real time", take turns and realize that not everyone is a winner. This can be accomplished with simple card games and or board games. An easy and fun game that could be modified is to take a beach ball and add math questions with post it notes on it. Play music and pass the ball around until the music stops. Whoever has the ball when the music stops turn to their neighbor to the right and together they answer the math question.

Another strategy is to also assist the students in self-regulating their behaviors. At times, those who are not always comfortable in math become easily overwhelmed. Encourage the students to "Take a Deep Breath" or count till 10 prior to starting a problem. This technique helps to calm someone down, think more clearly, and overcome the impulse of getting overwhelmed.

We have only begun to touch the basic premise of understanding SEL's. Please let me know if I can help in any way. Reach out to me at jgood@ramapo.edu. Have a rewarding and successful school year!

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AMTNJ Members Represent at NJEA John Kerrigan, Ed.D



AMTNJ volunteers John Kerrigan and Joan Vas recently represented our organization at the NJEA Jack Bertolino Summer Conference, engaging with mathematics educators from across New Jersey. Their presence at this important event helped raise awareness of AMTNJ's upcoming conference and resources among the state's teaching community. Throughout the conference, John and Joan distributed AMTNJ conference flyers, providing attendees with information about our valuable professional development opportunities.

In addition to promoting AMTNJ's conference, our volunteers offered free mathematical manipulatives generously provided by EAI Education. These hands-on tools generated significant interest among conference-goers, sparking conversations about effective math instruction strategies. John and Joan took advantage of these interactions to discuss AMTNJ's mission and benefits with numerous educators, fostering connections that may lead to increased involvement in our organization.

Looking ahead, AMTNJ is excited to announce that our presence at NJEA events will be significantly enhanced in the coming year. Thanks to newly forged partnerships, we have secured tabling opportunities at various NJEA events at no cost to our organization. This development will allow AMTNJ to reach an even wider audience of educators, share our resources more broadly, and continue to grow our network of mathematics professionals across the state. These expanded opportunities underscore the value of our ongoing collaboration with NJEA and reaffirm our commitment to supporting and connecting math educators throughout New Jersey.

2024 NJ PAEMST State Finalists Announced



Last March Hanan Attiyah and Bryan Pawling were named the New Jersey Finalists for the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) in the area of mathematics and/or computer science. The Presidential Awards recognize outstanding teaching for grades k-12 in science, technology, engineering, mathematics and/or computer science. The 2023-2024 nomination cycle for Presidential Awards was open for teachers grades k - 6, and applications were submitted in early February. Candidates for the award must demonstrate mastery of their content, exemplary pedagogical skills and various assessment strategies. In addition these finalists exhibit habits of reflective practice and demonstrate leadership in education in their school, district and beyond.



Hanan Attiyah

Hanan Attiyah is an Elementary Technology Integration Specialist in the Flemington - Raritan Regional School District. While only in the 2nd year of the position at Francis A. Desmares School, she has transformed the STEM program for students in Grades 2 to 5 after winning the CIA: Mission Impossible STEM Laboratory Prize of \$60,000. Her career began as a 3rd grade teacher in Virginia at Sinclair Elementary School in 2004, then continued at An-Noor Academy Private School in New Jersey before arriving at Francis A.Desmares. While continuing as a 3rd grade teacher, she worked closely with the Integration Specialist to integrate lessons grounded in student inquiry creating excitement for learning and discovery. Hanan's extensive knowledge of the mathematical standards has guided her to craft activities in coding and robotics that provide students with a solid foundation in computer science as well as mathematics. Last January the school celebrated the <u>Grand Opening of the STEM Lab</u>, an innovative space for exploration of science, engineering technology and mathematics driven by curiosity and creativity.

Hanan completed her Master's in Instructional Technology in 2010 and is now pursuing a Master's in Education Leadership at The College of New Jersey. She has presented lessons on Robotics & Mathematics at the Computer Science Teacher Association of NJ Conference and is looking forward to presenting at the National CSTA conference in Las Vegas to share how the lessons highlight the common thread of the languages of computer science and mathematics. In the upcoming year, Hanan aspires to expand the curriculum to include some of the earliest learners in the district.







2024 NJ PAEMST State Finalists Announced (continued)



Bryan Pawling

Bryan Pawling is a STEM Teacher at KIPP Lanning Middle School in Camden where he has been teaching middle school Science and Computer Science since 2012. In the 2023-2024 school year Bryan's growth of the STEM program led to a full-time position to teach a STEM curriculum aligned to the NGSS standards to students in grades 5 to 8. He has been a team leader and department chair leading their curriculum development of the STEM program and providing teacher training to incorporate effective instructional strategies based on data - driven observations.

Bryan is a graduate of Rutgers University in New Brunswick and began his career through Teach for America at Freedom Prep Middle School teaching 8th grade. Throughout his time in the classroom he has been passionate about bringing high quality instruction and rich experiences to his students in the STEM fields. His lessons involve "mission" activities in which students are challenged to complete coding sequences grounded in creative problemsolving, iterative behavior and critical thinking. He partnered with Project Lead the Way to pilot programs such as Computer Science for Innovators and Makers and App Creators for grades 7-8, while also bringing 3D printers and laser engravers to the classroom.

In 2018 Bryan was recognized as the Teacher of the Year by the Philadelphia Eagles and Axalta Coating Systems for bringing innovative STEM programming to KIPP Lanning Middle School. Throughout his teaching career his goal has been to provide equal access for all students in the STEM fields. Bryan looks forward to continuing their LEGO Robotics Team, offering more computer science coursework based in JavaScript and Python and introducing computer science to students in earlier grades.

These state finalists were selected by a panel of New Jersey mathematicians, education researchers, district level personnel and classroom teachers. Each received feedback from the panel and had the opportunity to revise his/her submitted application before it was forwarded to the national competition. There are 2 finalists for mathematics and 3 finalists for science. On May 21, 2024, the national PAEMST team celebrated all state finalists in a virtual event. Next, the National Science Foundation reviews the applications of the state finalists and forwards 2 candidates to the White House Office of Science and Technology Policy. The winners receive a certificate signed by the president, a \$10,000 award from NSF, and a paid trip to recognition events and professional development offerings in Washington, DC. Best of luck to Hanan and Bryan! For more information about PAEMST or to nominate an outstanding grade 7-12 teacher for 2024-2025, please visit paemst.org.

AMTNJ: Stay in the know



BROOKDALE COMMUNITY COLLEGE

FEATURED SPEAKERS

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Author, Plenary Speaker

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Providing Student Feedback In Mathematics is More Than Just A Comment $\bigstar \bigstar \bigstar \bigstar \bigstar \bigstar$

By: Erin Fedina, Supervisor of Mathematics and Gifted Education Howell Township Public Schools

How often do you comment on your students' work? When you comment on your students' work, is it mainly to ask them to show their work? Commenting on students' assessments is not enough and possibly too late. In a time when information is accessible to everyone and modern conveniences have replaced grit, we have to reconsider the way we approach teaching. One way is to focus on the types of feedback that we provide our students.

The three stages of feedback include understanding students' previous knowledge through data and discussion, standards-based feedback relative to the progression of the standards, in conjunction with opportunities for self-regulation.

The first stage of feedback needs to focus around the students previous knowledge with clear standards-based goals in mind. The students should be aware of the prerequisite knowledge that is needed when learning a new topic as well as their level of comprehension of that learning progression. This is significant in closing the achievement gaps within the classroom. Many districts have benchmarking data that can be used to discuss individual students' knowledge of skills and concepts that will be required to be applied to the new content. Oftentimes the class is structured around the teacher disseminating information for two-thirds of the period leaving only one-third of the time for independent practice. This lesson plan structure does not allow for individual feedback time or small group instruction; both of which are necessary with the diversity of learners within today's classrooms. Instead, if the teacher meets with the students prior to beginning the chapter to discuss the prior knowledge needed for the new content, then the student could choose independent practice time for revisiting skills and teachers could plan their differentiation based on those specific needs.

As the students are engaged in the new content, they should be aware of the expectations of the standards which apply to the second stage of feedback. Students must be given clear and explicit learning goals so that they understand the expectations for their learning and can be guided towards achieving the grade level mastery. In grade 4, the New Jersey Student Learning Standard 4.NBT.B.4 expects the students to demonstrate the following: With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.



Feedback to the students should include discussions on which strategy they have chosen to accurately and efficiently solve addition and subtraction problems involving multi-digit whole numbers as well as ways in which their accuracy and efficiency could be improved. By having the student articulate the process that they have taken to find the sum or difference, teachers can listen for the misconceptions then provide explicit instruction based on how the student describes their thinking. Standards such as 5.NF.B.6 expect the students to be able to Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem. The feedback given to students when demonstrating understanding in solving real world problems should look much different than a standard that requires procedural knowledge.

Feedback should include strategies on approaching application based questions such as: ways to organize the problem for better understanding, identify securely held knowledge the individual student has and how can they apply that knowledge to this particular problem, and most importantly, teachers should not be teaching or explaining how to solve real world problems. These are the opportunities to learn how your students apply the skills and concepts taught within the lesson as well as the chapter depending on where the problem solving questions are within the sequence of the chapter. If the teacher feels compelled to teach the word problems then they should ask themselves, "Is this a skill that I don't think they can perform or is it the comprehension?" By deciphering between the two questions a teacher can determine if they need to continue to teach the skill and provide feedback on the procedure or work with the students on successful ways to comprehend a mathematical word problem. Most importantly, teachers should not solve the word problems in a whole group setting. That strips away all learners' ability to productively struggle in mathematics. By providing explicit feedback, the students are able to work specifically on the steps needed to better understand the problem as well as opportunities to expand their thinking for deeper understanding.

The third stage of feedback is the most critical in that it is a culmination of all three stages of feedback. In this stage students learn how to be self-regulators of their learning. Students need to be involved in their learning plan so that they are empowered to become self-advocators. The critical nature of this level of feedback is to empower students to be seekers of their own learning. They must be given the opportunity to understand what knowledge they have secured previously, be given the support to achieve mastery of the grade level standards, and most importantly be accountable for their learning.

As humans, we don't know what we don't know. Without bringing clarity to the standards and teaching students how to be knowledge seekers, students will not be motivated to improve or rise to higher expectations. As teachers we are the facilitators of learning whereas the students should be the seekers of knowledge. This is not something that naturally occurs and should be modeled repeatedly throughout the year.



Joseph Michael Nuspl PhD

Mick, PP#66, 2016MAX

1940 - 2024

"It is with a heavy heart that I share the sad news that Mick Nuspl passed away on Sunday, August 18, 2024," wrote Dr. Deborah L. Ives, Deby, PP #92, 2013MAX. "I will surely miss our kind and wonderful friend and colleague." Deby worked with Mick and other on "The First Hundred years of AMTNJ."

Dr. John E. Hammett III, PP #94, 2003MAX, added "This is indeed sad news. Blessing and grace to all who knew and loved Mick."

From Angelo DeMattia, PP #86, 2005MAX, came "His contributions to AMTNJ as a leader and more recently as its historian was colossal. We will miss his sharing of stories and photos of past AMTNJ Presidents at our annual conferences."

Willard Blaskopf, PP #90, 2012MAX, shared, "Mick was one of the first AMTNJ presidents I ever met. He was always welcoming and interested in others. I will always appreciate that fact that he encouraged me to get more involved. Mick, R.I.P. You will be missed."

AMTNJ was important to him, but, he was casual about being a PP and, I think, prouder to have his 2016 Max Sobel Award.



Mick was appreciated in the non-AMTNJ world. He was a husband, father, grandfather, uncle, teacher, coach, baseball afficionado. His niece Julie Evey said, "Thinking of you, my dear uncle. Always a smile on your face and a bad math joke ready. :) So proud to have known you." and Dan Earley shared, "I met Coach back in 1962 at Hiram High School. It was his first teaching position and he had the enviable task of explaining Algebra to me. He also coached JV basketball of which I was a member. His patience was tested both in the classroom and on the basketball court." His obit is linked through the QR-code.

My work with Mick was the richest and most rewarding time in AMTNJ. I, Agnes (A²) Azzolino, PP#89, 2017MAX, was webmaster for part of his time as Historian. We were both past presidents and for me, going "up the ladder" was not always a joy. But we were still doing committee work and attending the Saturday morning meetings, NCTM meetings in NJ, and other AMTNJ meetings, and, working with Mick was a real and continuous joy. At that time, Mick wrote his Tiny Treasures. He was creative, diligent, and a real pleasure to learn from.

Mick "collected" past presidents, their other interests, their teaching institutions, their birthdays and deaths.

At a meeting, Mick stood by his table answering questions and sharing history. One might learn:

1. What two mathematics buildings in NJ are named after AMTNJ Past Presidents?

2. Which Past Presidents are married?

3. Which Past President taught and was a math department chair in both NJ and NY?

4. Who would ask such questions? AND KNOW THE ANSWERS?

Answers:

1. Henry B. Fine, PP#2, and Virgil S. Mallory, PP#19.

2. There are two answers (naturally, in math one wishes all solutions). David Glatzer, PP#67, 1993MAX, is married to Joyce Glatzer, PP#75, 1999MAX, and Neil Cooperman, PP#100, 2018MAX is married to Stephanie Cooperman, PP#105.



Back row left to right: Thomas Buscemi 1984-85, Stephen Krulik 1987-88, Jerry Parisi 1976-77, Arthur Collard 1971-72, David Glatzer 1980-81, Eugene Clark 1969-70, Arthur LePori 1968-69, J. Michael Nuspl 1979-80, Margaret Cotter 1964-65, Gail Koplin 1960-61, George McMeen 1959-60, Henry Petersen 1972-73, Kenneth Wolff 1981-82

Seated left to right: Thomas Tobiasen 1985-86, Beverly Whittington 1983-84, Mary Froustet 1970-71, Ellen Brockman 1986-87, Lina Walter 1957-58, Regina Cullen 1978-79, Charles Lewis 1975-76, Max Sobel 1958-59

Photo taken at the AMTNJ spring meeting held at West Essex High School on March 18, 1989 As historian, Mick recorded people & events.



The archives committee of the Association of Mathematics Teachers of New Jersey (AMTNJ) has found and verified the photos of 103 of 104 Presidents of AMTNJ. According to Past-president #66 Dr. J. Michael Nuspl 1979-1980, "we have been searching for more than six years and have found all but one Past-president photo. We have located many text references but NO PHOTO of May J. Kelley AMTNJ President #41 in 1954-1955. Mrs Kelly was a teacher at Brighton Avenue School in Atlantic City, NJ. "

Nuspl added, "if anyone has any leads in finding a photo of Mrs Kelly, contact me at nusplmath@optonline.net".

photo taken at AMTNJ meeting on March 3, 2018 by Dr. Makoto Yoshida, AMTNJ President 2017

3. Mick!

4. The wonderful, very special and dear, Joseph Michael Nuspl PhD, Mick, PP#66, 2016MAX!!!!!

Math Shirt Monday







Andrea Bean, AMTNJ Past President

The spirit of NJ math teachers is unparalleled, and it's time to let it shine! Embrace the excitement for mathematics and show off your pride by participating in Math Shirt Monday, a year-long celebration of our love for all things math.

Every Monday, we invite you to wear your most vibrant and quirky Math themed shirts to school. Whether it's equations, mathematical patterns, or punny math jokes – let your shirts speak volumes about your passion for the subject!

But the fun doesn't stop there! We encourage you to take a group picture with your fellow math enthusiasts and tweet it using the hashtag #mathshirtMonday. Share the joy and camaraderie with the world as we come together as a strong math community in New Jersey.

Tag us at AMTNJ (Association of Mathematics Teachers of New Jersey) to be a part of this exciting movement. By doing so, you not only inspire others to embrace the joy of math but also stand a chance to win fantastic prizes! *****

Math Shirt Monday is more than just a dress-up event; it's an opportunity to foster a positive environment around mathematics, encourage creative expressions, and ignite curiosity in our students. Let's unite as educators, showcasing the boundless enthusiasm we have for teaching math.

So, raid your closets for those amazing math-themed shirts, and let's make every Monday a celebration of our collective love for mathematics. Together, we'll create a memorable and inspiring experience that our students will cherish forever.

Join us for Math Shirt Monday, and let's set the stage for an incredible year filled with math pride and spirit!

Happy Math Shirt Monday! 🌟







New Teachers Section



By: Audra Crist, M.A., Instructional Technology

Are you struggling with the content you are teaching? Do you want to change up lessons from previous years? Are you in a time crunch and need an activity ASAP? Do you want to incorporate more word problems into your daily lessons? Where can you start with the preparation?

Some answers may surprise you.

The <u>Mathematics Teaching Materials</u> section of the NJCTL website is a free, open source curriculum resource that can be used in any classroom. Materials are organized by course/grade level, unit, (sometimes chapter), and resource categories (e.g., presentation, classwork-homework, lab, etc.). Each unit within a course contains at least one hands-on and/or Virtual Lab activity that helps students discover various mathematical concepts and reinforces topics being taught. Below are a few examples:

- 2nd grade math: <u>1000 Wins RAFT Lab</u>: Students will create two 3-digit numbers from 6 cards that sum as close to 1000 as possible. It is a great way to make addition fun.
- 4th grade math: Introduction to Fractions Virtual Lab and Answer Key: Students will use the PhET Fractions Intro Simulation fraction maker to construct fractions, investigate equivalent fractions, and compare/order fraction values.
- 7th grade math (or any high school course on Pi Day): <u>Exploration of Pi Virtual Lab</u> and <u>Answer Key</u>: Students will investigate and discover that pi represents the constant of proportionality between the circumference and diameter of a circle. While working through the lab, students will create and describe, in writing, graphs that show measurements of circles and generalize that the value of pi is a little more than 3.
- Geometry: <u>Quadrilaterals GeoGebra Virtual Lab</u> and <u>Answer Key</u>: Students will investigate various quadrilaterals to determine which properties define specific special quadrilaterals.
- Precalculus: <u>Vectors Virtual Lab</u> and <u>Answer Key</u>: Students will investigate the real-world applications of vectors through the use of the <u>PhET Vector Addition Simulation</u>.



New Teachers Section



What do I do if I struggle with content I am teaching?

All of these Teaching Materials are free for any educator to download and use in the air classrooms. We ask them to <u>register</u> (still free) to access lab answer keys and assessments, which are not accessible to students and parents.

In our <u>Online Courses for Educators</u> (not free; available for graduate credit &/or alternate route certification), educators experience the virtual labs, determine adjustments/modifications that can be made for their students, and make connections between the lab activities and the math practice standards.

As an educator, I have implemented more application-based problems in my classroom through <u>Bedtime Math</u> as "Do Now"/"Warm-up" problems, especially when my middle school and/or high school students' prerequisite skills need some assistance. When alternate route and/or math endorsement candidates ask for ideas and/or resources to expose students to word problems more often, I have also recommended this resource. It is a great way to help students "buy in" to various math concepts, including those where they struggle. Bedtime Math provides a "real-world" story each day and math problems at varying levels. If middle school and/or high school students are struggling with prerequisite skills, then the "Big Kids" level questions are a good starting point. These questions mainly come from grades 3-5 mathematics. Another level that can tap into other middle school & sometimes high school skills are from "The Sky's the Limit" level. Below is a sample question from Sept. 25, 2023:

In the fairy tale of the princess and the pea, a very picky princess can feel a tiny pea under her bed, even though it's under a stack of 20 mattresses and 20 poofy blankets. But what Bedtime Math fan Tanisha T. wants to know is, how many peas could we stuff into a whole mattress? Now that we know we can fit 3 peas per inch (see photo), let's find out how many can fit under that prickly princess.

- Wee ones (grades Pre-K & K):
- What shape is a pea?
- Little kids (grades K-2):
- If you can fit 3 peas in a row, and then make 3 rows to fill a square inch, how many peas fit in that square?
- If they came from just 2 pods, and each pod had at least 2 peas, how many ways could they have been split between the pods? (Don't worry about the order of pods.)
- Big Kids (grades 2-4): A cube that's 1 inch wide in every direction can fit 3 layers of those 9-pea squares. How many peas fit in a cubic inch?
- They say that British people eat <u>9,000 peas per year</u> on average. If you ate 20 per day, would you be keeping up? (Hints if needed: A year has 365 days...and multiplying by 20 is like multiplying by 2 and then by 10.)
- The Sky's the Limit (grades 4+):
- If there are 3x3x3 peas in a cubic inch, and a mattress is 200 inches long, 50 inches wide, and 10 inches thick, how many peas can we fit after all?



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The solutions to these questions are made available on the Bedtime Math website (or their free Apple/Android app), below the questions.

The reason that "The Sky's the Limit" questions are referenced in grades 4+ is that this level can vary quite a bit based on the concepts being used to solve the problem. For example, another Bedtime Math problem from early Sept. 2023, titled <u>A Very Prickly Family</u>, can be solved with a system of 3 linear equations.

I also use Bedtime Math every night with my son (4th grader; started w/ him in Pre-K), and it's helping him "not be afraid" of word problems experienced in school. He is up to solving "Big Kids" questions and "The Sky's the Limit". When I asked him last year, "What do you think about word problems?", he told me, "They're easy."







New Teacher Tips: Building Relationships at the Middle & High School Level

By Vanessa Poggioli (8th Grade Math-Glassboro Public Schools)

In an elementary setting, it was easy for me to get to know the 60 students and families in my classes. When our building transitioned to a middle school, I had to find new ways to quickly build connections. Here are some strategies that have worked for me.

- Tiered System of First Contact: With over 100 students, calling every family to introduce myself is not feasible, so I prioritize first contact. All families receive an introductory email inviting them to Back to School Night. Students with an IEP or 504 get a personalized email asking if they would prefer a phone call to discuss their student. During the first two days of school, I observe students who might present a behavior challenge. I call these families to ensure that we have a positive conversation prior to any negative phone calls about discipline.
- Student Survey: I give students this survey as a warm up on the first day and keep them all year to reference.
 - Do you have a nickname you like? Are there nicknames you do not want to be called? (Helps me avoid immediately alienating them by referring to them in a way that makes them uncomfortable.)
 - Who was your favorite teacher last year? Why? (Gives me someone to go to if I need more insight on a student and helps me understand what they find effective in a teacher.)
 - From 1-5, how much do you like middle school? How much do you like math? (Helps identify students with math anxiety/negative math experiences and those who are struggling to fit in or adapt.)
 - What is important to you? How do you learn best? (Students share their hobbies so I can use them in word problems as well as their learning styles.)
 - What else do you want me to know about you? (Students have shared all kinds of things, such as preferred pronouns, anxiety, classmates they prefer to work with, not wanting to be called on, recent loss of a family member, etc.)
- Family Survey: As a grade team, we send a Google form to families in English and Spanish that captures updated contact information and communication preferences. The most important question is at the end and gives us precious insight into students as we start the year and helps identify who we should follow up with.
 - Is there anything else you want us to know? This includes nicknames, with whom the student resides, any religious, academic, physical or mental health concerns, recent changes in a students' life, things that have helped them achieve success in previous years, difficulties with particular subjects, behavior, or remote learning, etc. All information will remain confidential. We look forward to building a relationship with you as we educate your child!

Math Education Student Corner

Attention future math teachers! This corner is for you. We want to feature research, thought pieces, art, and questions by current math education students at the undergraduate or graduate level. Please email info@amtnj.org for more info or to submit a piece of work!

Puzzle Corner

KenKen is a "grid-based numerical puzzle" that looks like a combined number cross and sudoku grid. Invented in 2004 by a famous Japanese math instructor named Tetsuya Miyamoto, it is featured daily in *The New York Times* and other newspapers. It challenges students to practice their basic math skills while they apply logic and critical thinking skills to the problem.

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THE ASSOCIATION OF MATHEMATICS TEACHERS OF NEW JERSEY

SCHOLARSHIP APPLICATION – DEADLINE, April 15, 2025

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EXTRACURRICULAR ACTIVITIES:	#3	
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PERSONAL ESSAYS:		
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This application must be a copy of your scores on the Association of Mathematic than one page and signed. Applications postmarked during an AMTNJ Board of	SAT or the ACT, and exactly three letters SAT or the ACT, and exactly three letters as Teachers of New Jersey and one from All information must be typewritten in after the deadline, April 15, 2025 will no Trustees Meeting in May, 2025.	r high school transcript through the first semester of the senior year, a rs of recommendation, one from an ACTIVE member of the o one of your high school math teachers. Each letter sho <u>uld be n</u> o more an easy-to-read font. Handwritten applications cannot be accepted. ot be accepted. Awardees will be introduced and award ceremony held
CERTIFICATION: By my si	gnature, I certify that all of the informa	tion given by me on this form is true and complete to the best of my
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LATE APPLICATIONS NOT ACCEPTED. TO ENSURE DELIVERY SEND "RETURN RECEIPT"

Newsletter Acknowledgements

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President Cheryl Fricchione Joan Vas John Kerrigan, Ed.D. **Katy Laird Justin Liendo** Julie Norflus-Good, Ed.D. **Agnes Azzolino Kathleen Carter** Andrea Bean **Audra Crist** Vanessa Poggioli Erin Fedina

Editor: Kara Teehan, Ph.D.