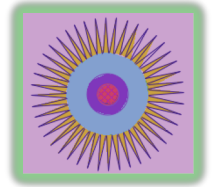


AMTNJ's 2019 Summer Institutes



Learn to model mathematics in the classroom, assess students formatively, create new lesson plan ideas, and much more!

1.) **Three-Day Mathematics Institute on Fridays**

Grades 3 – 8 Teachers, Specialists, Math Coaches, Supervisors, School & District Administrators
Date: July 12, 2019 – July 26, 2019 Location: Rutgers University Hill Room 525, New Brunswick, NJ
Presenters: Debra Gulick

Number Sense & Operations: Problem Solving – Friday, July 26, 2019

This series of workshops is designed to address standards based instruction in the upper elementary and middle school grades. This session will focus on problem solving strategies and practices that can be embedded into every day instruction in order to foster the development of the mathematical practices in your students. You may participate in one, two or three sessions.

2.) **Teaching and Learning Mathematics in the 21st Century through the Use of Technology**

Grades 6– 12 Teachers, Higher Education, Pre-Service Teachers, Supervisors and Coaches
Date: Wednesday, July 17, 2019 Location: Clifton Public Schools
Presenter: Coshetty Vargas

Teachers will use laptops / iPads to explore various instructional strategies of our evolving classrooms of the 21st century by incorporating valuable websites and apps that encourage the use of meaningful engaging activities to enhance technology use and learning in the classroom. Teachers are not limited to just using these technology tools but also involve your students to create their own personal activities such as generating QR codes, creating their own video or a game from an interactive educational website. Bring a phone or iPad with a QR code reader / scanner app.

3.) **The Art of Being a Mathematical Coach or Supervisor**

Grades 6– 12 Teachers, Specialists, Math Coaches, Supervisors, School & District Administrators
Date: Tuesday, July 30, 2019 Location: West Windsor – Plainsboro, West Windsor Township, NJ
Presenter: Andrea Bean and Alison Nass

This workshop will provide resources and tools for working with teachers to improve the learning experiences for all students. We will highlight ways to build relationships, create meaningful PD experiences, tackle difficult situations, and build teacher capacity. The work and research of Jim Knight, best-selling author and president of Instructional Coaching Group, will serve as a foundation for our session.

4.) **Wonder-Full and Event-Full Probability in Grades 5 - 10**

Grades 5 – 10 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors
Date: Thursday, August 1, 2019 Location: Kent Place School, Summit, NJ
Presenter: Ralph Pantozzi

Chances are... that you can increase your students' odds of developing deep understanding of random events. Activities full of noticing and wondering are the first step. Take random walks, eat M&M's, build colorful towers, and experience other event-full simulation activities that will motivate students to pose questions and pursue them long after the last coin is flipped. We'll examine a sequence of lessons that in grades 5 through 10, with ideas accessible to all and connections to topics through Algebra 2 and beyond. You'll leave feeling confident of your students' likelihood of success with key ideas in probability.

5.) Exploring Functions through Modeling and Technology in Grades 9- 12

Grades 5 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors

Date: Tuesday, August 6, 2019

Location: Kent Place School, Summit, NJ

Presenter: Ralph Pantozzi

Modeling with mathematics is a multistep process that involves students in understanding phenomena in the world around them through the lens of mathematics and making decisions that honor the “messiness” of the real world, where judgment calls are needed, and the math is not the final answer. We also want students to work with prepackaged mathematical models that they find on the SAT and the AP exams. How do we meet both goals? Use technology, (Desmos, Geometer’s Sketchpad, calculators, and more), along with experiments with real objects. We’ll play with swings, tires, remote control cars, and mirrors, and make shadows, party hats. See how modeling in Geometry, Algebra 2, and Precalculus helps students build skills through opportunities to compare messy data with the ideal math, explore the properties of functions, and test theories back in the real world.

6.) Changing the Pathways for Math- for 6-12 Math Supervisors/Administrators

Grades 6– 12 Teachers, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Wednesday, August 7, 2019

Location: Clifton Public Schools

Presenter: Jennifer Goforth

Conversations around course sequencing in math to increase equity to access for high level math, supporting teachers and closing the achievement gap.

7.) Creative Differentiated STEAM Projects for Middle and High School Students

Grades 5 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors

Date: Thursday, August 8, 2019

Location: North Hunterdon High School, Annandale, NJ

Presenter: Coshetty Vargas

Teachers will explore, create and use sample STEAM projects to differentiate various levels within the common core standards of middle and high school students. Meaningful STEAM projects include tessellations, house scale drawings, magic squares, polyhedra models, business entrepreneur, career scavenger hunt, string art, bridges, and traveling brochures.

8.) Using Desmos to Teach Algebra 2 and Pre-Calculus - Annadale

Grades 6– 12 Teachers, Higher Education, Pre-Service Teachers, Supervisors and Coaches

Date: Wednesday, August 14, 2019

Location: North Hunterdon High School, Annandale, NJ

Presenter: Kathleen Carter

Participants will play the role of students in examples of rich math tasks utilizing the Desmos Calculator and Desmos Activity Builder. Activities for topics such as quadratics, polynomials, and rational functions will be shared. Participant will learn to customize Activity Builder lessons and how to use the Desmos Activity builder for assessments. This workshop is designed for grade 9-12 educators with tools for ongoing support shared for learning after the workshop. Bring your laptop!

9.) Flipping the Classroom in Math for Teachers

Grades 6 – 12 Teachers, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Wednesday, August 14, 2019

Location: Clifton Public Schools

Presenter: Jennifer Goforth

Are you looking for ways to integrate technology in the classroom effectively? Do you want to increase the number of students completing homework? Then Flipping the Classroom may be a strategy you want to implement in your classes. This workshop will provide a framework for flipped learning- where students watch instructional videos for homework and do the practice in class. Please bring your laptop.

10.) Understanding Quadratics

Grades 8 – 12 Teachers, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Thursday, August 15, 2019

Location: North Hunderdon High School, Annandale, NJ

Presenter: Kathleen Carter

This session will analyze Quadratic Functions in its various representations to help students understand the characteristics of quadratic relationships. First, the behavior of quadratic number patterns will be analyzed to facilitate writing recursive and explicit formulas. Then, the characteristics of the graph of the parent function will be discussed as a foundation for the exploration of transformations. The different forms of the equations of quadratics will be compared for purposes of graphing and modeling quadratic relationships. The session will also demonstrate how the Desmos online graphing calculator can be incorporated to stimulate classroom discussion and analysis of quadratics. Modeling with quadratics using the graphing calculator and Desmos will be presented. Please bring a laptop or tablet to participate in the Desmos part of the presentation and a graphing calculator.

AMTNJ's 2019 Summer Institute Registration Form

Name: _____ School District: _____
Home Phone: _____ Cell Phone: _____
School Name: _____ School Phone: _____

School Address: _____ City: _____ State: _____ Zip Code: _____

Home Email Address: _____

Home Address: _____ City: _____ State: _____ Zip Code: _____

Registration Fee

The fee is \$149 for the first institute and \$119 for each additional institute.

Registration:

Circle the number of the summer institute(s). (Please note – you may also register online at www.amtnj.org.)

- 1.) Number Sense & Operations: Problem Solving
- 2.) Teaching and Learning Mathematics in the 21st Century through the Use of Technology
- 3.) The Art of Being a Mathematical Coach or Supervisor
- 4.) Wonder–Full and Event–Full Probability in Grades 5 - 10
- 5.) Changing the Pathways for Math- for 6-12 Math Supervisors/Administrators
- 6.) Exploring Functions through Modeling and Technology in Grades 9- 12
- 7.) Creative Differentiated STEAM Projects for Middle and High School Students
- 8.) Using Desmos to Teach Algebra 2 and Pre-Calculus - Annandale
- 9.) Flipping the Classroom in Math for Teachers
- 10.) Understanding Quadratics

All workshops will be from 8:30 a.m. – 2:00 p.m. with a half hour break for lunch. Please bring your lunch; light refreshments will be provided.

Number of Institutes Circled: _____

Total fees for all registrations: \$ _____ PO Number: _____ or Check Number _____

Please return this form, along with payment to AMTNJ – PO Box 264 Bay Head, NJ 08742. Please make checks payable to “AMTNJ”.

Some sessions are popular and seats are limited. Therefore, payment must be received two weeks prior to the summer institute. To receive a refund for a participant's **cancellations**, AMTNJ **must receive written notice two weeks prior** to the workshop. All cancellation emails must be sent to amtnj@juno.com and diannamsopala@yahoo.com, AMTNJ reserves the right to cancel one week prior to an institute if the registration number is not met. If you have any questions, please send an email to amtnj@juno.com, diannamsopala@yahoo.com or call us at 201-481-2878. Our fax number is 732-399-5388.