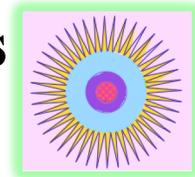


# AMTNJ's 2017 Summer Institutes



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

1.) **The High School Math Curriculum: The Status Quo Is Unacceptable**

Grades 3 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators, Governmental Officials

Date: Monday, June 26, 2017

Location: Clifton High School Annex, Clifton, NJ

Presenter: Eric Milou

The Common Core has done little to improve the 9-12 math curriculum, which seems mostly unchanged from decades past. This session will discuss realistic steps that the math community must take including creating math pathways for high school students and a focus on modeling tasks.

2.) **Math Problem Solving? No Problem!**

Grades 3 – 5 Teachers, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Tuesday, June 27, 2017

Location: Clifton High School Annex, Clifton, NJ

Presenter: Laura Giumarra

Learn to integrate the technique of bar modeling into your math lessons. Bar modeling helps students visualize a problem before they compute, giving them a concrete representation of abstract words. We will explore problems from all grade levels, using all four operations, and fractions! This workshop will help you meet Mathematical Practice 1, “Make sense of problems and persevere in solving them,” as well as problem solving standards in the Common Core (including but not limited to) 3.OA.D.8-9, 4.OA.A.1-3, and 5.NF.A-B. Participants will receive a handout with model problems and a list of resources both print and electronic. Hopefully, all will leave with a good feeling that they can help their students reduce anxiety about math word problems.

3.) **Modeling Real World Mathematics in the Classroom**

Grades 6 – 12 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Tuesday, June 27, 2017

Location: Clifton High School Annex, Clifton, NJ

Presenter: Dianna Sopala

Modeling mathematics is an easy way to engage all students in a lesson. The best modeling problems have a low threshold and a high ceiling. Workshop participants will review problems that model mathematics and develop a rubric for them. Real world problem sets and labs will be given. STEM lessons using topics from middle school math, Algebra 1, Geometry, and Algebra 2 will also be provided. Participants will have the opportunity to create their own problems; so, please bring your laptops, curriculum guides, and graphing calculators.

4.) **Teaching Strategies for the Danielson Model**

Grades 6 – 12 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Wednesday, June 28, 2017

Location: Mohawk Avenue School, Sparta, NJ

Presenter: Rosemary Bayliss

This workshop will focus on strategies that address the four domains of the Danielson Model for teacher evaluation. Participants will learn ways to improve planning and preparation, classroom environment, instruction, and professional responsibilities. These strategies will come from the personal experiences of other educators who have had success with them. Participants will learn the strategies, work in groups to modify them for their own use, and share with each other.

5.) **Becoming Friends with Fractions**

Grades 4 – 7 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Wednesday, June 28, 2017 Location: Parsippany-Troy Hills School District, Parsippany, NJ

Presenter: Debra Gulick

A deep understanding of fractions is essential to student success in higher-level mathematics. The New Jersey Student Learning Standards introduces fractions at grade three, and requires a deep understanding of what they represent in addition to operations with fractions. At this workshop, teachers will explore multiple representations of fractions, and consider ways to connect them throughout the grade level curriculum. Specific attention will be given to Common Core progressions documents: [http://commoncoretools.me/wp-content/uploads/2011/08/ccss\\_progression\\_nf\\_35\\_2013\\_09\\_19.pdf](http://commoncoretools.me/wp-content/uploads/2011/08/ccss_progression_nf_35_2013_09_19.pdf).

6.) **Creating Meaningful Learning Objectives and Using Them to Guide Lesson Planning**

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

Date: Thursday, June 29, 2017 Location: Clifton High School Annex Clifton, NJ

Presenter: Emily Creveling

In this workshop, participants will learn how to create meaningful learning objectives in order to better guide their lesson planning. Participants will learn how to focus in on what students need to know, how to express this in the form of well-crafted learning objectives, and how to craft lesson plans that support students in meeting the objectives. The session includes an overview of the purpose behind learning objectives (including reference to UbD planning), an abbreviated sample lesson in which effective planning strategies are modeled, an examination of sample objectives and lesson plans, and a practical application portion where participants have the opportunity to apply their learning to the classes and lessons they are currently teaching.

7.) **Math Task Design with Desmos Activity Builder**

Grades 6 – 12 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Thursday, July 6, 2017

Location: Rancocas Valley High School, Mt. Holly, NJ

Presenter: Robert Lochel

Participants will play the role of students in examples of rich math tasks facilitated through Desmos Activity Builder, and discuss guidelines for designing effective, engaging technology-based activities. In small work teams, the group will build their own "first" Activity Builder lessons and consider how tech-based activities support student learning. This workshop is designed for grade 6-12 educators, with tools for ongoing support shared for learning after the workshop. Bring your laptop!

8.) **Using Good Wrong Answers for Math Confidence and Success**

Grades 3 – 12 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Monday, July 10, 2017

Location: Northern Highlands, Allendale, NJ

Presenter: Robin Schwartz

Multiple-choice tests have tempting incorrect answers that often reflect students' common misunderstandings. Studying these "good wrong answers" and identifying potential errors leads to deeper comprehension, higher confidence and better grades while improving problem-solving skills. Participants will receive a packet of excellent questions with 'good wrong answers'.

9.) **Math Activities for Fun Grades 3-6**

Grades 3 – 6 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Tuesday, July 11, 2017

Location: Northern Highlands, Allendale, NJ

Presenter: Luann Voza

Presenting 25 standards-aligned activities for grades 3-6. When math is creative, personal, artistic, competitive and relevant,

students will be engaged and motivated. While pattern rapping, walking to the moon and playing the price is close enough, students will spread the word that your math class is the place to be.

**10.) Preparing High School Students to Take the AP Statistics Exam**

Grades 6 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors

Date: Wednesday, July 12, 2017 Location: Rancocas Valley High School, Mt. Holly, NJ

Presenter: Doug Smith

The speaker will provide valuable insight on how to prepare students for the free response questions found on this exam. Selected examples will be discussed and topics range from boxplots to two-sample tests to linear regression in one variable. Participants might want to bring a laptop as well as a TI-84 plus calculator.

**11.) A Visual Approach to Math and Language Arts - Grades 6-8**

Grades 3 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors

Date: Thursday, July 13, 2017 Location: Parsippany-Troy Hills School District, Parsippany, NJ

Presenters: Deborah DeMattia & Angelo DeMattia

What does language have to do with math? A picture may be worth a thousand words but words complete the picture. That is why RISA consultants developed the “PAW” process, a strategy that helps students make strong connections between the abstractions of mathematics/ language arts and their everyday experiences. This workshop will help teachers develop this more visually based learning – for all students, including the SE and ELL. Also presented will be ample hands-on and technology based lessons that will help teachers to help students attain a higher level of achievement on PARCC assessments as well as to gain a better understanding of the Common Core Math and Language Arts Standards. Bring a graphing calculator, laptop, and memory drive.

**12.) ELs in the Mathematics Classroom**

Grades 6 – 12 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Tuesday, July 18, 2017 Location: West Windsor – Plainsboro, West Windsor Township, NJ

Presenter: Amanda Lowry

Want to know how to incorporate English Learners (ELs) into your math class? What modifications can be made to ensure success for ELs in math? Please come ready to learn strategies to help your English Learners. Bring an assessment and/or activity that you would like to modify for ELs. We will discuss strategies, modifications and resources to help all learners be successful in math.

**13.) Differentiated Stations and STEAM Student Engagement Activities**

Grades 5 – 8 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Tuesday, July 18, 2017 Location: West Windsor – Plainsboro, West Windsor Township, NJ

Presenter: Sandy Vorensky

Personalizing the learning experience for students begins with differentiating activities that are meaningful and also include a real-life application of mathematics. Participants will have the opportunity to explore strategies for implementing differentiated stations as well as hands on STEAM activities. This workshop is designed to be interactive and in a collaborative format.

**14.) Tips for Math Coaches, Math Supervisors, and Math Leaders**

Grades K – 12 Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Thursday, July 27, 2017 Location: West Windsor – Plainsboro, West Windsor Township, NJ

Presenter: Angelo DeMattia

How can math teachers be supported on their journey to provide quality learning for their students? This workshop will help participants explore various support structures that will help attain the above goal. If you are new to math leadership,

this session will help clarify this enormous task and will help you gain confidence as to where to begin. If you are experienced, this session will help you rethink the educational approaches and your training. Ultimately, you will improve as a knowledgeable practitioner, capable of using your extensive math understanding and teaching experiences to help children from varied cultural backgrounds become convincing mathematicians.

- 15.) **Developing Mathematical Habits of the Mind - Thinking the Math Instead of Doing the Math**  
Grades 6 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors  
Date: Tuesday, August 1, 2017 Location: Parsippany-Troy Hills School District, Parsippany, NJ  
Presenter: Tom Beatini

This workshop will provide you with resources that engage students in meaningful learning experiences to encourage students to think mathematically. Topics in Algebra I, Geometry, and Algebra II will be addressed that shift the focus of teaching around rich tasks. Pedagogical strategies and techniques that help students develop and foster mathematical habits of the mind through problem solving, modeling, and making mathematical connections will be discussed. Classroom-ready hands-on materials that focus on the development of conceptual and procedural knowledge utilizing these methods and suggestions that facilitate hard-to-teach topics (such as composition of functions) will be shared. Don't forget to bring a graphing calculator, as it will be used to demonstrate techniques of upside-down teaching!

- 16.) **Formulating Formative Assessments and Creating Quality Questions for Summative Assessments**  
Grades 6 – 12 Teachers, Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators  
Date: Thursday, August 3, 2017 Location: Parsippany-Troy Hills School District, Parsippany, NJ  
Presenters: Lena Komitas & Dianna M. Sopala

As teachers, we assess our students every day. This session will explore different formative assessment ideas. Some strategies will include the use of technology. The questions we incorporate into our formative and summative assessments are important. What kind of questions do we ask our students? Why do we ask these questions? Do we pose questions at the right time? We will discuss in this workshop various forms of questioning techniques, their purpose, and the cognitive level of questions (DOK and Bloom's Taxonomy). Asking good questions can improve students' engagement, provide us with information on what students know and do not know, and move them forward in their learning. The participants will have time to create various types of questions for given mathematical tasks/objectives that can be used for formative and/or summative assessments. How do teachers know that their assessments address the standards? Participants will use Student Achievement Partners' Assessment Evaluation tool to evaluate assessments and review Achieve the Core's online assessment tools. All questions will be shared among the participants. Join us to start collaboratively planning your questions for the next school year!

- 17.) **Help! My Students Don't Remember What They Learned Last Year (K-2): Filling in the Gaps in Students' Learning**  
Grades K – 2 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators  
Date: Tuesday, August 8, 2017 Location: Clifton High School Annex Clifton, NJ  
Presenter: Denise Rawding

Do you want to learn how to address gaps in students' math understanding and skills while still moving forward with the curriculum? In this workshop, you will learn how to identify prerequisite skills that support the current grade level's math work. You will also explore ways to support students in building necessary prior understandings and skills through math centers and scaffolded lessons. Please bring a laptop.

- 18.) **Tech in the Math Classroom Grades 7-12**  
Grades 7 – 12 Math Teachers & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors  
Date: Tuesday, August 8, 2017 Location: Clifton High School Annex, Clifton, NJ  
Presenter: Dianna Sopala & Nicole Zayatz

How do you effectively use technology as an instruction tool and an assessment tool? Teachers will learn to use current apps to guide instruction and the learning process. Teachers will learn to use apps for assessments and use these data to help drive instruction. Please bring a charged laptop.

**19.) A Visual Approach to Algebra & the NJ Standards**

Grades 7 – 9 Math Teachers & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors

Date: Wednesday, August 9, 2017 Location: North Hunterdon High School, Annandale, NJ

Presenter: Angelo DeMattia

Too few students can demonstrate a deep conceptual understanding of algebraic relationships. This workshop will assist teachers in developing a more visually based lesson format. More visually based lessons create opportunities for students – including SE & ELL – to effectively make transitions from concrete ideas/visual to abstract concepts. The emphasis will be on applying the PAW process: P is for Pictures, A is for Algebra, and W is for words. Ample hands-on lessons will highlight the process that helps students attain a higher level of achievement on the new PARCC assessments and help teachers experience a new connection to the Common Core Standards. Bring your laptop and graphing calculator.

**20.) Engaging Formative Assessment Techniques With Technology**

Grades 6 – 12 Teachers, Pre-Service Teachers/Educators, Specialists, Math Coaches, Supervisors, School & District Administrators

Date: Friday, August 11, 2017

Location: Clearview Regional School District, Mullica

Hill, NJ

Presenter: Eric Milou

This session will have teachers engaging in several formative assessment tasks using free technology from Desmos to Nearpod. The tasks will demonstrate that we can engage students in their learning and assess their understanding in real time using such technology.

**21.) Incorporating Desmos in Algebra 2 and Pre-Calculus Classes**

Grades 9 – 12 Math & Teacher Leaders, Teachers/Educators, Specialists, Math Coaches, Supervisors

Date: Thursday, August 17, 2017 Location: North Hunterdon High School, Annandale, NJ

Presenter: Kathleen Carter

The use of the online Desmos calculator engages students in activities that incorporate the Common Core Mathematical Practices. In this session, Desmos activities will be shared that allow students to model using mathematics, explore transformations, and analyze functions and relations. Participants will be introduced to the Desmos Activity Builder Activities to learn to customize Desmos activities. The incorporation of Desmos will also allow students to make connections between graphs, data tables and equations. Bring a laptop or iPad.

## AMTNJ's 2017 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 Fees:

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](http://www.amtnj.org).)

- 1.) The High School Math Curriculum: The Status Quo Is Unacceptable
- 2.) Math Problem Solving? No Problem!
- 3.) Modeling Real World Mathematics in the Classroom
- 4.) Teaching Strategies for the Danielson Model
- 5.) Becoming Friends with Fractions
- 6.) Creating Meaningful Learning Objectives and Using Them to Guide Lesson Planning
- 7.) Math Task Design with Desmos Activity Builder
- 8.) Using Good Wrong Answers for Math Confidence and Success
- 9.) Math Activities for Fun Grades 3-6
- 10.) Preparing High School Students to Take the AP Statistics Exam
- 11.) A Visual Approach to Math and Language Arts - Grades 6-8
- 12.) ELs in the Mathematics Classroom
- 13.) Differentiated Stations and STEAM Student Engagement Activities
- 14.) Tips for Math Coaches, Math Supervisors, and Math Leaders
- 15.) Developing Mathematical Habits of the Mind-Thinking the Math Instead of Doing the Math
- 16.) Formulating Formative Assessments and Creating Quality Questions for Summative Assessments
- 17.) Help! My Students Don't Remember What They Learned Last Year (K-2): Filling in the Gaps in Students' Learning
- 18.) A Tech in the Math Classroom Grades 7-12
- 19.) A Visual Approach to Algebra & the NJ Standards
- 20.) Engaging Formative Assessment Techniques With Technology
- 21.) Incorporating Desmos in Algebra 2 and Pre-Calculus Classes

*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 cancelations, AMTNJ **must receive written notice two weeks prior** to the workshop. All cancelation emails must be sent to [amtnj@juno.com](mailto:amtnj@juno.com) and [diannamsopala@yahoo.com](mailto: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](mailto:amtnj@juno.com), [diannamsopala@yahoo.com](mailto:diannamsopala@yahoo.com) or call us at 732-788-1257. Our fax number is 732-399-5388.