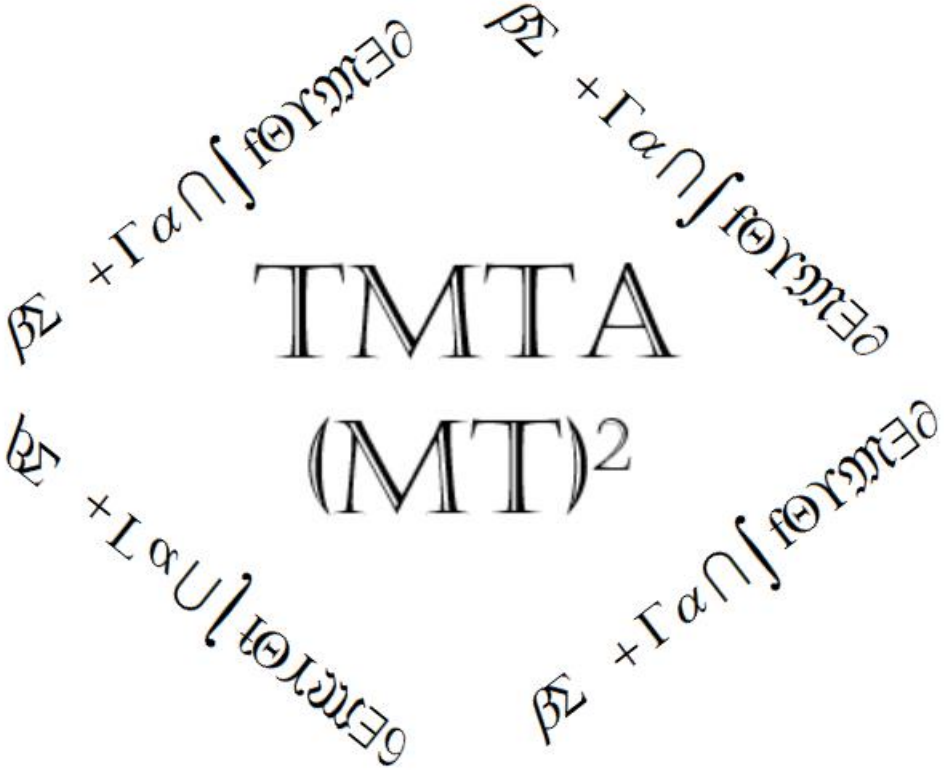
TENNESSEE MATHEMATICS TEACHERS ASSOCIATION

State Conference

September 23 & 24, 2016



Hosted by

Tennessee Mathematics Teachers Association and

Middle Tennessee Math Teachers

At Middle Tennessee State University, Murfreesboro, TN

Conference Registration & Vendor Exhibits

Friday, September 23, 1:30 p.m. – 5:45 p.m.

Saturday, September 24, 7:45 a.m. – 2:30 p.m.

Conference Registration: South Lobby of BAS Building

THANK YOU to our VENDORS
for their generous contributions to the TMTA Conference.
Please visit them in the South Lobby of the BAS Building in the registration area and on the 2nd floor balcony of the BAS Building overlooking the South Lobby.

Casio

ExploreLearning

Origo

Pearson

Texas Instruments

TLJ Consulting Group

Tennesseans for Student Success

MTSU Campus Map Available at

http://www.mtsu.edu/maps/docs/CampusMap.pdf.

Check the TMTA webpage after September 1 for information on parking.

Friday Sessions 1 & 2

3:30 – 5:20

Grades 3-5 – BAS S264

Effective Instructional Routines for the Mathematics Classroom
Raven Hawes, Angela Brumfield, hawesrd@scsk12.org, brumfielda@scsk12.org
Participants will explore the elements and practices of an effective mathematics lesson by engaging in a high-level task. This session will be a 100 minute session.
Strands Addressed: Number and Operation, Algebra, Mathematical Processes, General Activities, Content and Pedagogy

Friday Session 1: 3:30 – 4:20

Grades K-2 – BAS S126

Reasoning with Mathematics
Kathryn Dillard, Dillard.Kathryn@gmail.com
Using games and problem solving activities, participants will be engaged in activities that allow students to make sense of problems, reason abstractly and quantitatively, and construct justifications. This session will be repeated on Saturday.
Strands Addressed: Number and Operation, Algebra, Mathematical Processes

Grades K-2, 3-5 – BAS S279

More Than Counting to Ten: Hands-On Math Activities
Deborah Cantrell, debbie-cantrell@utc.edu
This session will concentrate on math activities for the elementary classroom.
Strands addressed: Number and Operation, Geometry/Measurement, General Activities

Grades K-2, 3-5, Middle School, General – BAS S260

Growing Mathematical Mindsets
Jennifer Meadows, jrmeadows@tntech.edu
What is a growth mindset, and what does it have to do with the math classroom? Based on the work of Carol Dweck and Jo Boaler, this session will address these questions and highlight ways to grow a mathematical mindset in the classroom.
Strands Addressed: Mathematical Processes, General Activities

Grades 3-5 – BAS S277

Using Area Models for Fraction Operations
Audrey Bullock, bullocka@apsu.edu
Participants will discuss using area models to compare, add, subtract, multiply, and divide fractions.
Strands Addressed: Number and Operation

Middle School – BAS S276

Pascal's Patterns
Lea Keith, Lisa Elliott, Lea.Keith@rcstn.net, Lisa.Elliott@cmcss.net
Learn how to use patterns in Pascal's triangle to make connections to various topics in middle school math.
Strands Addressed: Algebra, Data Analysis, General Activities

Middle School, High School – BAS S272

Algebra Tiles: The Concrete Approach to Developing Mathematical Fluency
Tom Beatini, tmpeasant@mindspring.com
Algebra Tiles can help students create their own conceptual and procedural knowledge while developing mathematical fluency and building self-confidence. Hands-on materials will be shared.
Strands Addressed: Algebra, Mathematical Processes

Middle School, High School – BAS S274

Compatible Pair: Math and Social Justice
Ashley Walther, Lynn Hodge, agrob@vols.utk.edu , lhodge4@utk.edu
Experience a hands-on lesson that combines mathematics and issues of social justice. Learn ways to engage students and their communities in meaningful mathematics.
Strands Addressed: General Activities

Middle School, High School, College – BAS S270

Tea, Guinness, Crop Yields: The Faces of Statistics
Tammy Jones, tammyjones@tljconsultinggroup.com
Framing statistics within a historical and contextual perspective provides new opportunities in which students can read about and investigate topics.
Strands Addressed: Data Analysis, Statistics, Probability

Middle School, High School – BAS S330

Making Trigonometry Interactive with Support of GeoGebra
Amdeberhan A. Tessma, Sarah Bleiler-Baxter, aat3q@mtmail.mtsu.edu, sarah.bleiler@mtsu.edu

Participants will engage in a problem-solving based trigonometry task utilizing GeoGebra software and reflect on how to modify the task for their own classroom instruction.

Strands Addressed: Mathematical Processes, Trigonometry

Middle School, High School, College – BAS S324

The 7 Words You Can't Say In Math Class
Jason Shuster, jshuster@usn.org

Teachers will discuss words you should not say in math class, and will talk about appropriate vocabulary that should be utilized in these situations.

Strands Addressed: Mathematical Processes

High School, College – BAS S316

Explore Geometry in Construction Tasks
Holly Anthony, hanthony@tntech.edu

Participants will explore two tasks focused on Geometry in Construction. We will create our own measuring tool and design an irrigation system per real world constraints.

Strands Addressed: Geometry/Measurement, Mathematical Processes, Teacher of Teachers

High School, College – BAS S339

The Math Behind Music
Sister Cecilia Anne Wanner, srcanne@stcecilia.edu

Some music is pleasing to the ear; some is not. Learn how trigonometry determines harmony and dissonance, and how exponential functions determine the pitches of a musical scale.

Strands Addressed: Trigonometry, Algebra, STEM, Mathematical Processes

High School – BAS S304 (Computer Lab)

Transforming the Teaching of Math with Technology
Elaine Vaughan

Hands-on activities for assessing and engaging students through Google and other online tools will be demonstrated. These tools are students' favorites and promote academic achievement.

Strands Addressed: Technology

Friday Session 2, 4:30 – 5:20

Grades K-2 – BAS S126

VennTuring into Math and ELA in Grades K-2
Jeremy Winters and Cindy Cliche, jwinters@mtsu.edu, cindy.cliche@cityschools.net
Venn Diagrams can be helpful or harmful. Grade level activities will be shared that help students reason with Venn Diagrams in appropriate ways.
Strands Addressed: Mathematical Processes

Grades K-2, 3-5, Middle School – BAS S279

Using Diagrams in Mathematics Problem Solving
Rongjin Huang, rhuang@mtsu.edu
This session examines K-6 teachers' strategies in using diagrams when solving word problems. Different functions of the use of diagrams in mathematics learning will be discussed.
Strands Addressed: Number and Operation

Grades K-2, 3-5, Middle School, High School - BAS S260

Using Number Talks to Transform Instructional Practice
Brandon Banes, banesbc@lipscomb.edu
Participants will practice number talks as students. Experiences of the presenter using number talks to transform teaching practices will be shared.
Strands Addressed: Number and Operation, Algebra, Teacher of Teachers

Grades 3-5 - BAS S277

Fraction Fun for Upper Elementary!
Jennifer Wilson, jenniferwilson@anderson5.net
Join us as we learn how to teach fractions in an engaging way so that the children have fun at the same time! We will learn and practice strategies that involve games and manipulatives to make fractions fun again. This session will be repeated on Saturday.
Strands Addressed: Number and Operation

Grades 3-5, Midde School, High School – BAS S304 (Computer Lab)

Personalizing Learning with Peer Tutoring and Producing
Rebecca Layton, rdoty1@vols.utk.edu
Personalize learning through students creating products about math concepts. Have students use their products to peer tutor other students needing help understanding the math concept.
Strands Addressed: STEM, General Activities

Middle School – BAS S276

Math Manipulatives from TMTA Grant

Lea Keith, Lea.Keith@rcstn.net

This session focuses on using manipulatives in middle school math. The following manipulatives will be used: Pattern Blocks, Spinners, VersaTiles, Hands-on Equations, Fraction Tiles, and Cuisenaire Rods. You will also learn how to apply for the TMTA Grant which is $1000 that can be used for technology or manipulatives.

Strands Addressed: Numbers and Operation, Probability, General Activities

Middle School – BAS S274

Engaging Students with STEM Activities

Michael Lawson, Ashley Walther, Lynn Hodge, Gale Stanley, mlawso13@vols.utk.edu, agrob@vols.utk.edu, lhodge4@utk.edu, gale.stanley@ccps.tn.net

Participants will learn strategies for incorporating STEM activities in the math classroom. Presenters will share resources and engage participants in a hands-on STEM lesson.

Strands Addressed: STEM

Middle School – BAS S272

From Icebreakers to Geometric Discussions: Using Quick Draw in a Middle Grades Classroom

Teresa Schmidt, Teresa.schmidt@mtsu.edu

Experience a way to implement Quick Draw in a middle grades classroom. Session includes discussion of student work and potential uses and benefits of Quick Draw.

Strands Addressed: Geometry/Measurement, STEM, Mathematical Processes, General Activities

Middle School, College - BAS S316

The Preparation of Middle School Mathematics Teachers

Jo Ann Cady, Keilah Kane, Rebecca Layton, Jcady@utk.edu, kkane4@utk.edu, rdoty1@utk.edu

In this session will briefly highlight the new middle school teacher prep program at UT and then engage participants in a discussion about the content and pedagogy that should be included in the preparation of middle school teachers.

Strands Addressed: Teacher of Teachers

High School – BAS S339

Real World Applications in the Mathematics Classroom

Deborah Cantrell, debbie-cantrell@utc.edu

Algebraic/statistical experiments from the ITQ-THEC Real World Applications in the Mathematics Classroom Workshop will be presented utilizing the TI-84 Plus CE calculator and Vernier sensors.

Strands Addressed: Algebra, Data Analysis, Statistics, and Probability, STEM

High School – BAS S324

Creating Tasks Relevant to Small Learning Communities
Teresa Agee, teresa.agee@mnps.org

This session will give examples of activities created or modified to address the needs of the students in small learning communities. Suggestions of resources teachers can use in creating their own activities for small learning communities will be provided.

Strands Addressed: Algebra, Data Analysis, Statistics, and Probability

High School, College, General - BAS S330

Coordinating Cooperative Creation: The Group Proof Activity
Sarah Bleiler-Baxter, Jeffrey Pair, Sarah.Bleiler@mtsu.edu, Jeffrey.Pair@mtsu.edu

In this interactive session participants will experience the group proof activity and learn how it may be implemented in their own classroom.

Strands Addressed: Mathematical Processes, General Activities

Awards Banquet

6:15 Student Union Ballroom

Honoring TMTA Contest Winners

Tom Reardon, Speaker

My Favorite Problem-Solving Activities for K - 12 with Thanks to George. And Technology.

"Problem solving should be the central focus of the mathematics curriculum." - NCTM

We will look at some of my favorite activities that encourage students to make sense of problems and persevere in solving them. I will draw on my experience of teaching the Math for Elementary Teachers sequence at the university level for grades K through 8 and my 35 years of experience of teaching high school. We will look at several problem solving strategies and how to apply them. Appropriate technology will be integrated creatively. Be prepared as this will be an audience participation event.

Continental Breakfast

South Lobby, BAS Building
Saturday, 7:45 – 8:30

Saturday Session 1: 8:30 – 9:20

Grades K-2- BAS S126

Reasoning with Mathematics
Kathryn Dillard, Dillard.kathryn@gmail.com

Using games and problem solving activities, participant will be engaged in activities that allow students to make sense of problems, reason abstractly and quantitatively, and construct justifications. This session is a repeat of the Friday session.

Strands Addressed: Number and Operation, Algebra, Mathematical Processes

Grades K-2, 3-5, Middle, High, College – BAS S279

Building a Math Specialists' Network
Paul Gray, Pam Stidham, pgray@mathedleadership.org, pstidham@k12k.com

Leading implementation of new math standards and resources? Come join math coaches, specialists, and coordinators to learn more about resources available to support mathematics leadership in Tennessee!

Strands Addressed: Mathematical Processes, General Activities, Teacher of Teachers, Mathematics Leadership

Grades 3-5, Middle, High – BAS S260

Do Your Classroom Management Strategies Add Up?
Peter Vajda, pvajda@truenorthpartnering.com

Learn "8:00 Monday morning" research-based strategies of a fair and simple classroom management system that will eliminate unwanted behaviors by 70% or more. Learn the essential steps of teaching to expected behaviors and discover the benefits and the importance of positive interactions with your students.

Strands Addressed: Teacher of Teachers

Grades 3-5 – BAS S277

Fraction Fun for Upper Elementary!
Jennifer Wilson, jenniferwilson@anderson5.net
Join us as we learn how to teach fractions in an engaging way so that the children have fun at the same time! We will learn and practice strategies that involve games and manipulatives to make fractions fun again. This session is a repeat of the Friday session.
Strands Addressed: Number and Operation

Middle School, High School, College – BAS S276

Remarkable CAS: Defined, Applied & Refined
Candace Terry, candace.terry@tcsedu.net
Have you ever wondered what CAS represents? Learn how the symbolic algebra feature can assist learners' conceptual understanding of algebra.
Strands Addressed: Algebra, STEM, General Activities

Middle School, High School, College - BAS S304 (Computer Lab)

Raspberry Pi Computing: Connecting Mathematics, Arts, and Engineering
Vincent Betro, vbetro@baylorschool.org
Attendees use a Raspberry Pi and camera attachment. They write a python script creating a time-lapse video, requiring understanding of scaling, rates, and visual appeal.
Strands Addressed: Geometry/Measurement, STEM, Mathematical Processes, General Activities

Middle School, High School, General – BAS S272

"Not all who wander are lost."
Leslie Howe, mail@howe-two.com
Many topics in math "interfere" with each other. Learning is a process. Student awareness of the interference can actually make more discerning mathematicians.
Strands Addressed: Number and Operation, Algebra, Geometry/Measurement, Mathematical Processes, General Activities, Teacher of Teachers, Technology

Middle School, High School, College, General – BAS S316

Transforming the Mathematics Classroom Through Humor and Activities
MA Higgs, Daryl Stephens, MA.Higgs@mtsu.edu, stephen@etsu.edu
Humor and in-class activities are fun ways to transform the mathematics classroom into an active learning environment. Participate and bring your sense of humor!
Strands Addressed: Algebra, General Activities

High School – BAS S274

Hands On, Minds On
Houston Daniel, hdaniel@dcbe.org
A creative discourse into the every day mathematical classroom. Viewing mathematics from an unconventional perspective.
Strands Addressed: Number and Operation, Algebra, Teacher of Teachers

High School – BAS S330

Standards-Based Grading in the Secondary Mathematics Classroom
Greg Pavinich, Deanna Pickel, Chantelle Stevens, gapavinich@ortn.edu, dlpickel@ortn.edu, castevens@ortn.edu
Introduction of Standards-based grading into the secondary mathematics classroom will be discussed, including development of learning targets, rubrics, and assessments.
Strands Addressed: Teacher of Teachers

High School – BAS S324

Full S.T.E.A.M. Ahead!
Daniel Wilkie, Jeff Lamb, dwilkie@greenville.k12.sc.us, jeffrey.lamb@spart5.net
Let me show you how to engage your students with the TI-Nspire CX Handheld and Navigator to pique their interest in Math, Science and Art.
Strands Addressed: Algebra, Geometry/Measurement, Data Analysis, Statistics, and Probability, STEM, Mathematical Processes

High School – BAS S339

Transformational Quilting (HSG.CO.A)
Carey Wilson, cawolanin21@gmail.com
This lesson can used as a cross-curricular school project. Students in Geometry will use their newly acquired skills in transformations to design a quilt block.
Strands Addressed: Geometry/Measurement

Saturday Session 2: 9:30 – 10:20

Grades K-2, 3-5 – BAS S270

Is That Really the Only Strategy?
Julie Martin, Carla Richards, Julie.Martin@mnps.org, Carla.richards@wcs.edu
In this session we will explore problems that have multiple solutions and the growth mindset. We will delve into the importance of mathematics struggle for students as it prepares them for higher level math and confident problem solving.
Strands Addressed: Geometry, Mathematical Process Stanadards

Grades K-2, 3-5 – BAS S126

Mathematics Intervention in the Early Grades

Laura Luna, Jennifer Briggs, laura.luna@tn.gov, Jennifer.briggs@tn.gov

Participants in this session will work with manipulatives, modeling, and hands-on thinking strategies to support mathematics intervention in the early grades.

Strands Addressed: Mathematics Intervention

Grades K-2, 3-5, Middle, High, College, General – BAS S264

Are You Interested or At Least Want to Know More about Leadership Opportunities in TMTA or Your Local Affiliate?

Desiree McCullough, Jackie Vogel, *dmccull1@utm.edu, vogelj@apsu.edu*

Come and hear us discuss the different positions and opportunities that are available. We will answer any questions that you have about being an officer or find someone that can. No pressure will be applied to you about seeking an office; this is just your chance to get answers about TMTA offices and committees that interest you.

Strands Addressed: Professional Organizations and Service

Grades 3-5 – BAS S277

Ideas for Math and Science Integration

Robin Bollman, robin.bollman@mtsu.edu

Participants will engage in hands-on lessons that integrate math and science concepts in the 3-5 classroom.

Strands Addressed: Math and Science Integration

Grades 3-5, Middle School – BAS S276

Progression of Algebraic Thinking

Trina Lewis, Tina Barber, Shannon Moss, tlewis@dcbe.org, trbarber3@gmail.com, Shannon.moss@cmcss.net

The purpose of this presentation is to discuss the progression of algebraic thinking from elementary into middle school grades and to give tips on how to make the progression easier for students.

Strands Addressed: Algebra

Grades 3-5, Middle, High School – BAS S272

Learning From Students' Productive Struggle

Tammy Jones, TammyJones@TLJConsultingGroup.com

Ensure that students are engaged in a productive struggle …tools, as well as lessons learned from their use will be shared to support student learning.

Strands Addressed: Mathematical Processes, Principles to Actions: Mathematics and Teaching Practices and Research

Middle School – BAS S274

That's Another Way to Look at It!
Melinda Hopkins, melinda.hopkins@knoxschools.org
This session will make connections between different representations of data through graphs, tables, equations, and word problems.
Strands Addressed: Algebra

Middle School – BAS S330

Bar Models and Tape Diagrams: A Strategy for Approaching Middle School Math
Jennifer Axley, Jennifer.axley@blountk12.org
Let's solve some middle school math problems through bar models and tape diagrams! We will explore fractions, ratio, rate, percent, and other "pesky" word problems.
Strands Addressed: Number and Operation, Algebra, Mathematical Processes

Middle School, High School – BAS S260

Transformational Geometry - Immediate Interactive Investigations – Gr 7-11
Tom Reardon, tom@tomreardon.com
Creatively integrate discovery, reasoning, technology, and pedagogy. Your students will become engaged quickly (15 seconds) and deeply by interacting with the geometry. Obtain all materials.
Strands Addressed: Geometry/Measurement, Mathematical Processes

Middle School, High School – BAS S279

Algebra 1: There's Power In The Visualization
Alice Carson, *alice.carson@knoxschools.org*, Carla.richards@wcs.edu.
Through tasks and technology, students can visualize algebraic concepts and help their understanding and comprehension. TI-Nspires will be used but you do not need to be proficient.
Strands Addressed: Algebra I

Middle School, High School – BAS S324

Pearson's MathXL for School
Donna Sabeno, donna.sabeno@pearson.com
Pearson's MathXL for School is an online addition to any core curriculum that provides personalized instruction and practice for middle and high school students of all levels. Tied directly to more than 300 Pearson mathematics and statistics texts, teachers can easily create, edit, and assign homework and tests. Math XL offers personalized learning, engages students with interactive media and provides automatic grading for immediate feedback.
Strands Addressed: Technology, online tools

High School – BAS S316

Acceleration Due to Gravity
Tamara Brewer, Yelena Kirillina, Ya Li, Shawn West, brewert@mcsed.net, ykirillina@acs.ac, liya01@hotmail.com, swest@oneidaschools.org
With the assistance of Lego Mindstorms EV3 robots and coding, we will model acceleration due to gravity.
Strands Addressed: STEM

High School – BAS S339

CATCH Math Project: Motivating Students with Career-Related Content
Caroline Maher-Boulis, Jason Robinson, Jeneva Clark, cmaherboulis@leeuniversity.edu, jrobinson@leeuniversity.edu, dr.jenevaclark@utk.edu
CATCH Math Project, funded by the Tennessee Higher Education Commission, showcases career-related Algebra and Geometry through real-world problems.
Strands Addressed: Algebra, Geometry/Measurement

Saturday Session 3: 10:30 – 11:20

Grades K-2 – BAS S126

Place Value in the Early Grades
MaryBeth Young, *marybeth.young@cityschools.net*
This session, led by an experienced kindergarten teacher, will engage participants in activities to develop an understanding of place value in the early grades.
Strands Addressed: Number and operation

Grades K-2, 3-5 – BAS S279

Problem Solving for Elementary School Teachers
Gary Hall, Gary.Hall@Lipscomb.edu
We will look at some activities that promote problem solving in the elementary school.
Strands Addressed: General Activities

Grades K-2, 3-5, Middle School, High School, College, General - BAS S277

Teaching the Nature of Mathematics: Establishing Goals
Jeffrey D. Pair, jeffrey.pair@mtsu.edu
In this session we will have a discussion about the nature of mathematics, and consider what we hope students learn about the nature of mathematics.
Strands Addressed: Mathematical Processes, Philosophy of Mathematics

Grades 3-5, Middle School, High School, College, General – BAS S264

Using Paper Folding in Teaching Geometric Concepts
Carroll Wells, Carroll.Wells@Lipscomb.edu
Participants will use paper folding to make geometric solids and to illustrate geometric concepts.
Strands Addressed: Geometry/Measurement

Grades 3-5 – BAS S128

Reasoning with Mathematics
Kathryn Dillard, Dillard.kathryn@gmail.com
Using games and activities to engage students to reason about mathematics, engage in problem solving, reason abstractly and quantitatively, and justify their answers.
Strands Addressed: Number and Operation, Algebra, Geometry/Measurement, Mathematical Processes

Grades 3-5, Middle School – BAS S272

Differentiate Your Way to a More Motivated Classroom
Kimberly Williams, Tammy Patterson, kwill126@utm.edu , tpatterson@utm.edu
Engage in hands-on strategies that will increase student motivation using tailored lessons that target tiered assignments, choice activities, and learning styles in this interactive session.
Strands Addressed: Mathematical Processes, General Activities

Middle School, High School – BAS S274

Using Pinterest to Teach Learner-Centered Geometry
Melinda Pierce, mpierce@acs.ac
In this session, participants will be presented several hands-on activities for Geometry taken from Pinterest and be given practical advice for modification of any activities to fit in with their personal style. Modifications will consider time allotment, activity materials, class size, and teaching styles.
Strands Addressed: Geometry/Measurement, General Activities

Middle School, High School - BAS S330

Programming Mindstorms - Mastering Mathematics & Science Practices
Leslie Suters, Miri Blair, lsuters@tntech.edu, miri.blair@blountk12.org
Learn about programming Lego EV3 Mindstorm robots with Python. One project will be highlighted for Algebra called, “What’s Your Function”. Learn ways to begin coding in your classroom.
Strands Addressed: STEM

Middle School, High School - BAS S324

Outstanding Math Guides - OMG2

Leslie Hilderbrand, leslie.hilderbrand@douglas.k12.ga.us

Come make a student reference that will transform your classroom! OMG's include differentiated graphic organizers and vocabulary for each unit you teach. A must see!

Strands Addressed: Number and Operation, Algebra, Geometry/Measurement, Data Analysis, Statistics, and Probability, Mathematical Processes

Middle School, High School, College – BAS S316

Division Divas: Fabulously Fun, Star-Quality Mathematics Activities

MA Higgs, Christina Cobb, MA.Higgs@mtsu.edu

This humorous presentation includes FABULOUS attention grabbers, FUN math stations, and FANTASTIC writing activities. You are challenged to bring a FIRST-rate activity. Tiaras provided.

Strands Addressed: Algebra, General Activities

Middle School, High School, College – BAS S260

Tips & Tricks on the TI-84/TI-84CE (color), TI-SmartView

Tom Reardon, tom@tomreardon.com

New and experienced users. See how to use as an evaluator of complex expressions easily, trace on a graph/table simultaneously, use color photos... Fully utilize TI-SmartView graphing calculator emulator. Step-by-step colorful instructions.

Strands Addressed: Algebra, Mathematical Processes

High School, College – BAS S339

Reflection of Questioning Strategies During Inquiry-Based Lessons

Melanie Haupt, Matthew Duncan, Kristin Hartland, Meh3z@mtmail.mtsu.edu, matthew.duncan@mtsu.edu, Kristin.Hartland@mtsu.edu

Teachers' reflections on questioning techniques play an important role in promoting students' conceptual understandings. Inquiry-based lessons will be examined to support future reflections.

Strands Addressed: Mathematical Processes, Inquiry

High School - BAS S304 (Computer Lab)

Context and Comparison in Statistics

Lisa Elliott, John Garwood, Lisa.Elliott@cmcss.net, john.garwood@cmcss.net

This presentation will demonstrate how to use the comparison of data sets in context to increase overall statistical understanding in Algebra classes and AP Statistics.

Strands Addressed: Data Analysis, Statistics, and Probability, Mathematical Processes

LUNCH WITH AFFILIATES
11:30 – 12:20 See Rooms Below

CAMTA:	Chattanooga Area Mathematics Teachers' Association	BAS S260
SM2EA:	Smoky Mountain Mathematics Educator's Association	BAS S279
MACOTOM:	Memphis Area Council of Teachers of Mathematics	BAS S324
TMATYC:	Tennessee Mathematics Association for Two Year Colleges	BAS S316
MT2-NW:	Mathematics Teachers of Tennessee – Northwest	BAS S272
UETCTM:	Upper East Tennessee Council of Teachers of Mathematics	BAS S274
$(MT)^2$:	Middle Tennessee Mathematics Teachers	BAS S126
TAMTE:	Tennessee Association of Mathematics Teacher Educators	BAS S270

Saturday Sessions 4 & 5

12:30 – 2:20

General – Saunders Fine Arts Building 117

Music and Math
Steve Gadbois, *steve.gadbois@musowls.org*

We have largely forgotten what the ancients knew: music theory is largely mathematical. Demonstrations at the keyboard and with other devices will restore our understanding.

Strands Addressed: Interdisciplinary

Saturday Session 4: 12:30 – 1:20

Grades K-2 – BAS S126

Place Value in the Early Grades
MaryBeth Young, *marybeth.young@cityschools.net*

This session, led by an experienced kindergarten teacher, will engage participants in activities to develop an understanding of place value in the early grades.

Strands Addressed: Number and operation

Grades K-2, 3-5 – BAS S279

How Can I Improve Student's Arithmetic Fluency? Subitizing!
Jennifer Yantz, Rebecca Darrough, yantzj@apsu.edu, darroughr@apsu.edu
Subitizing is "seeing" the quantity in a group without counting. Come experience subitizing activities that support the development of fluency with addition, subtraction, and multiplication.
Strands Addressed: Number and Operation

K-2, 3-5, Middle, High, College – BAS S260

Using a Writing Prompt to Determine Math Anxiety
Kristina K. Hill, Texas A & M University, tina7@tamu.edu
Participants will discover two simple prompts they can use to determine if a student has a positive, negative, or neutral feeling towards mathematics.
Strands Addressed: General Activities

Grades 3-5 – BAS S277

Young Mathematicians, Multiple Representations, and Place Value
Tammy Jones, tammy.jones@tijconsultinggroup.com
Using multiple representations is one way that students show evidence of fluency with a topic. See how using multiple representations while investigating place value can help students deepen their understandings of this foundational topic. Children's literature and the Group 3 Model will be shared as well.
Strands Addressed: Number and Operation, Mathematical Processes

Grades 3-5, Middle School, High School – BAS S276

Can I Be a Student Teacher Mentor?
Theresa Hopkins, Robin Bollman, thopkins@utk.edu, robin.bollman@mtsu.edu
This session highlights the different mentoring opportunities connected to the M-Teach and VolsTeach program. For those interested in helping support future teachers.
Strands Addressed: Teacher of Teachers, Mentoring Student Teachers

Middle, High, College - BAS S304 (Computer Lab)

Learn Geogebra Easily. You Will Love it.
Sam Narimetta, snarimetla@tntech.edu
This session will show how to use Geogebra for geometry, trigonometry, precalculus, and calculus.
Strands Addressed: Algebra, Geometry/Measurement, STEM, Mathematical Processes

Middle School, High School – BAS S272

Developing Algebraic Concepts and Skills Using the Four-Pan Balance
Gary Nelson, garytnelson@hotmail.com
Speaker will demonstrate how to use the balance to explore equations, inequalities, and systems of equations.
Strands Addressed: Algebra

Middle School, High School – BAS S274

Using Manipulatives in the Secondary Math Classroom
Emily McDonald, mcdonald_emily@hcde.org
Participants will learn about using manipulatives and other resources that were obtained with the TMTA mini-grant.
Strands Addressed: Algebra, Geometry/Measurement

Middle School – BAS S330

Standards Based Grading
Laura Lemasters, Michele Glover, laura.lemasters@rcstn.net, Michele.glover@rcstn.net
We will show how to use Standards Based Grading in the math classroom using examples of Order of Operations and other standards.
Strands Addressed: Number and Operation, Algebra

Middle School – BAS S324

Transforming How Statistics is Taught in Middle Grades
Jennifer Lovett, Jennifer.Lovett@mtsu.edu
This session will discuss how to transform your statistical lessons by teaching statistics through data investigations and incorporating free technology!
Strands Addressed: Data Analysis, Statistics, and Probability

High School – BAS S316

Hands on Math: Using Sensors to Explore Math
Lisa Gibbs, lgibbs@grundyk12.com
Using Go Motion and other sensors to do hands on math activities (overview)
Strands Addressed: Algebra, General Activities

High School – BAS S339

Angles and Circles with Hula Hoops
Victoria Silvers, victoria.silvers@cmcss.net
Investigating central angles, inscribed angles, and triangles inscribed in circles when one sides is the diameter. The investigation is hands-on, using protractors to measure the angles.
Strands Addressed: Geometry/Measurement

High School – BAS S264

Panel Discussion: AP Stats 2016 FRQs
Alice Carson, Darin Clift, Brandon Hanson, alice.carson@knoxschools.org
Join the conversation as a panel of AP Readers discusses this past year's AP FRQs.
Strands Addressed: Data Analysis, Statistics, and Probability

High School, College, General – BAS S128

How Many Busted Brackets Are Out There?
Ryan Fox, ryan.fox@belmont.edu
Every March, fans predict winners of 68 collegiate basketball games. Other sports vary tournament structures that encourage good numerical comparisons and fascinating mathematical activities.
Strands Addressed: STEM, Mathematical Processes, General Activities

Saturday Session 5: 1:30 – 2:20

Grades K-2, 3-5 – BAS S126

Teaching Elementary Students Math With Learning Disabilities
Mary Stinson, mstinson2@my.apsu.edu
Teaching teacher different strategies they can use in their classroom for students on different learning levels.
Strands Addressed: Mathematical Processes

Grades K-2, 3-5, Middle, High, College – BAS S260

Being the Math Teacher You Wish You Had
Tammie Patterson, Kimberly Williams, tpatterson@utm.edu, kwill126@utm.edu
Do you remember the math teacher that turned you away from loving math? Research suggests that teachers' biases about math can create a love or hate relationship with mathematics. This session will give you engaging activities that will create students who cannot wait to see what is happening in your math class tomorrow!
Strands Addressed: Number and Operation, Algebra, Geometry/Measurement, Data Analysis, Statistics, and Probability, STEM, Mathematical Processes, General Activities, Teacher of Teachers

Grades 3-5 – BAS S279

VennTuring into Math and ELA in Grades 3-5
Jeremy Winters, Cindy Cliche, jwinters@mtsu.edu, cindy.cliche@cityschools.net
Venn Diagrams can be helpful or harmful. Grade level activities will be shared that help students reason with Venn Diagrams in appropriate ways.
Strands Addressed: Mathematical Processes

Grades 3-5, Middle – BAS S277

Conceptualizing Fraction Division: More Than Keep Change Flip
Margaret R Garwood, Jennifer Jessie, margaret.garwood@cmcss.net, jjessie@my.apsu.edu
Looking at division of fractions from a conceptual perspective. Use of models and alternative algorithms will be discussed.
Strands Addressed: Number and Operation

Grades 3-5, Middle School – BAS S276

Writing to Learn -- How to Really Learn It
Rena Malkofsky-Berger, rena@akivanashville.net
Is your student's mathematical writing strong enough to help them learn and to help you teach and assess? Learn how to help students really write to learn!
Strands Addressed: Number and Operation, Mathematical Processes, General Activities, Writing Across the Curriculum

Middle School – BAS S272

Paint by Integers
Melinda Hopkins, Theresa Hopkins, melinda.hopkins@knoxschools.org, thopkins@utk.edu
Using paint to develop conceptual understanding of integer addition
Strands Addressed: Number and Operation, Teacher of Teachers

Middle School, High School – BAS S274

Ipads for Math Classes
Nicole Hardison, Diana Ferguson, nhardison@clarksvilleacademy.com
Different ways to incorporate iPads into the math classroom will be demonstrated.
Strands Addressed: General Activities

Middle School, High School – BAS S330

Making Peace with Piece-wise Functions
Andrea Lawyer, Deni Migun, *andrea.lawyer.tn@gmail.com, deni.migun@knoxschools.org*
Piece-wise Functions reinforce understanding of domain, range, function types, interval notations and graphing in general. Start them early and use them often! Come get activities, teaching ideas, and inspiration!
Strands Addressed: Algebra

Middle School, High School, General – BAS S270

Engage Students with TI-Navigator: Formative and Summative Assessment
Candace Terry, candace.terry@tcsedu.net
Experience what it means to go live with presenters, quick polls, and screen captures. The tools will be modeled through a problem solving activity.
Strands Addressed: General Activities, Technology Tools

High School – BAS S324

Exponential Applications Lesson
Shelly Wilkinson, shelly.wilkinson@mnps.org
Teachers will explore the Snail Invasion task from Illustrative Mathematics and use that as a jumping off point to create an engaging lesson.
Strands Addressed: Algebra

High School – BAS S339

Standards-Based Grading
Brooke Derrick, Brooke.Derrick@ccstn.org
A practical approach to standards-based grading in the high school math classroom.
Strands Addressed: Grading

High School, College – BAS S316

A Modern Approach to Teaching Big Picture Statistics
Amber L Matuszewski, Brandon R Hanson, Jeremy Strayer alm6p@mtmail.mtsu.edu, brh2g@mtmail.mtsu.edu, Jeremy.strayer@mtsu.edu
Participants will engage in classroom-ready tasks focused on simulations for inference. They will learn about teaching strategies, simulation-related misconceptions, and technology resources.
Strands Addressed: Data Analysis, Statistics, and Probability

BUSINESS MEETING, DOOR PRIZES
2:30 – 3:30 BAS S102