

Wednesday

Session Title & Code	Session Description
<p>Eureka and Singapore Math K-8 9:45 – 11:30 <i>Code: (WTSEMK8)</i></p>	<p>Join Tricia Salerno, author and editor for EngageNY and author for Eureka Math 4th grade, as she leads a lively discussion on the basics of lesson planning and pacing for this unique program. The similarities of Eureka Math and Singapore Math will be pointed out in order to help educators understand the curriculum. This session is a “Must Attend” for anyone who is considering adoption or is currently using this program in grades K-8.</p>
<p>Is it too Late to Develop Number Sense in 6-8? 9:45 – 11:30 <i>Code: (WBFNS68)</i></p>	<p>Brad Fulton will show teachers how they can foster rich number sense and develop the eight mathematical practices using simple and powerful strategies. A comprehensive handout is included in session.</p>
<p>The How and Why of Singapore Math K-8 9:45 – 11:30 <i>Code: (WLWSMK8)</i></p>	<p>This session will explore the foundation and advantages of using the Singapore Approach. This session is meant to be an overview and comparison of Primary Math (all editions), Discovery Math, EngageNY/Eureka and Math in Focus. This session is especially geared to those considering adopting one of these programs as well as how each can support and be a resource for the others.</p>
<p>Early Algebraic Thinking K-2 9:45 – 11:30 <i>Code: (WKHATK2)</i></p>	<p>Many schools are introducing early algebraic thinking in their K-2 curriculum. It is important for teachers and administration to understand the motivation behind this. In this workshop, we will explore early algebraic thinking, -what is it and why does it matter? We will also see how it is incorporated in the Standards. Early algebraic thinking is not merely about x and y, as many would think. We will introduce the fundamental strategies and how we can extend current practices through simple lessons and fun activities to support this meaningful learning!</p>
<p>Fraction Kit Building Conceptual Understanding Grades 3-8 9:45 – 11:30 <i>Code: (WJRFK38)</i></p>	<p>Join Johnette Roberts as she leads this Marilyn Burns activity, one of the most effective tools for students AND teachers in grades 3 - 8 for building conceptual understanding of unit fractions, comparing fractions and understanding equivalence. This is a make and take activity and games for the classroom from the fraction kit.</p>
<p><i>Page 1 of 10</i></p>	



<p>Supporting Your Math Teachers k-8</p> <p>12:30 – 2:00</p> <p>Code: (WTSMTK8)</p>	<p>Teaching math in recent years has changed dramatically from the “Open your textbook and do the odd-numbered problems” approach. Teachers need content knowledge and pedagogical techniques now more than ever. How do we support teachers using on-site leaders? Tricia Salerno has acted as a math coach in public, private and charter schools. Attendees will leave this session with the tools to use immediately, to provide support your teachers.</p>
<p>Stem on a Shoe String 6-8</p> <p>12:30 – 2:00</p> <p>Code: (WBFSS68)</p>	<p>The goal of this session is for students to integrate content knowledge in science, technology, and math to engineer a solution to a problem. If we must teach certain content skills in math and science (and technology) that our STEM curriculum should not be a detour from that but a vehicle for that instruction and practice.</p>
<p>Introduction to Bar Models/Tape Diagrams 2-8</p> <p>12:30 – 2:00</p> <p>Code: (WLWIBM28)</p>	<p>This session is for those with little to no prior experience with Bar Model Drawing/Tape Diagrams. Model drawing is a systematic approach of representing word problems and connecting to abstract representation. Bar Models can solve 80% of pre-algebra word problems. Give your students the gift of problem solving.</p>
<p>Teaching in Singapore K-8</p> <p>12:30 – 2:00</p> <p>Code: (WKHTSK8)</p>	<p>Singapore Math first caught the attention of American Educators when its students consistently achieved high scores in math. Have you ever wondered how math is actually taught in Singapore? Kar Hwee, a graduate of Singapore’s National Institute of Education, will share her first-hand experience of teaching and learning math in Singapore. Teacher training, curriculum, assessment, school policies, and parent-teacher-student culture will be addressed.</p>
<p>Visualization Make and Take K-2</p> <p>12:30 – 2:00</p> <p>Code: (WJSVMK2)</p>	<p>Brain research tells us that visual mathematics helps students learn numerical mathematics while facilitating; higher-level thinking and enabling communication. Participants will make and take tools to help students subitize and visualize number. Story problems and building number sense to engage students in spatial visualization will also be explored.</p>
<p>Algorithm study Addition/subtraction 2-5</p> <p>2:15 – 4:00</p> <p>Code: (WTSAS25)</p>	<p>Research tells us that multiple models help students develop deep comprehension and meaning in mathematics. In this session, we will explore alternative algorithms for addition and subtraction, how these algorithms can help bring meaning to the standard algorithm.</p>



<p>Tangram Math: Teaching Geometry, Fractions, Algebra and More 6-8</p> <p>2:15 – 4:00</p> <p><i>Code: (WBFTM68)</i></p>	<p>Algebra meets geometry meets number sense in this engaging activity! Your students will so enjoy trying to solve these puzzles they will forget they are doing math. Easy to teach, yet rich in content, your students will study fractions, decimal, percents, area and perimeter, geometric properties, and probability all while applying algebraic thinking. Complete handouts will be provided in session.</p>
<p>Intro to Anchor Tasks K-8</p> <p>2:15 – 4:00</p> <p><i>Code: (WLWIAK8)</i></p>	<p>“I do, You do, We do” is no longer the teaching model for new concepts. Transforming the classroom to a more student led exploratory “You all do, We do, You do” approach results in teachers teaching less and students learning more. Participants will explore several grade level Anchor Tasks from the student perspective</p>
<p>Logical Thinking for Gifted and Talented K-8</p> <p>2:15 – 4:00</p> <p><i>Code: (WKHTGK8)</i></p>	<p>How do we engage our Gifted and Talented students? Kar Hwee will introduce some fun and stimulating math activities, and ways that teachers can make these accessible to your students. She will also share some prompts for simple questions and how these can lead to deeper conversations on what they have learned.</p>
<p>Differentiation K-2</p> <p>2:15 – 4:00</p> <p><i>Code: (WJRDFK2)</i></p>	<p>Participants will explore options for differentiating instruction for young learners. Although differentiation in the math class is not a “one size fits all” there is a broad range of strategies that both the novice and experienced teacher can implement to reach students with different aptitudes and abilities. Participants will engage in productive tasks that “lowers the floor and raises the ceiling”. Activities and games to support algebraic thinking and enhance students’ ability to reason will be provided. opportunities to show what they know.</p>

Thursday

Session Title & Code	Session Description
<p>Teaching Math to Students who live in Poverty</p> <p>8:30 – 10:00</p> <p><i>Code: (TTSSPK8)</i></p>	<p>Tricia Salerno will share her toolbox of techniques to motivate and engage students who live in economically challenging settings. These settings require distinctive approaches to teaching. Participants will gain strategies to combine life skills by teaching, sequencing, collaboration, and perseverance. Whether you are a principal, math coach or classroom teacher, you will walk away with a renewed vision of teaching math.</p>



<p>Fair Games: Engaging Ways to Teach Probability (grades 6-8)</p> <p>8:30 – 10:00</p> <p><i>Code: (TBFFG68)</i></p>	<p>More money is made in the private sector through probability than through any other branch of mathematics, but this domain is often underrepresented in the curriculum. This engaging exploration will teach students the principles of probability: fair and unfair, experimental and theoretical probability, and fraction and percent representations. Non-linear functions are a natural extension of this and even younger students will make the connections. Students love trying to find out how to create a fair version of this game. A complete handout awaits.</p>
<p>Problem Solving for Fractions 3-6</p> <p>8:30 – 10:00</p> <p><i>Code: (TKHSF36)</i></p>	<p>Problem solving can be tricky, especially when students do not have a good conceptual understanding in Fractions. In this session, we will touch n problem solving for Fractions, and how this in turn, can help students gain a better conceptual understanding.</p>
<p>Anchor Tasks 3-5</p> <p>8:30 – 10:00</p> <p><i>Code: (TLAAT35)</i></p>	<p>Regardless of the curriculum chosen by the school or district, teachers are called upon to help students develop growth mindset and grit. Mathematical “Anchor Tasks” provide students opportunity to do both! Come and learn how to write anchor tasks for your current curriculum, whatever text you are using. Ideas for finding appropriate activities, then developing the questioning that will not only lead students to deeper understanding, Teachers will write their own tasks so bring your teachers manual. There will be a limited number of preselected lessons available.</p>
<p>Intermediate Bar Models 3-5</p> <p>8:30 – 10:00</p> <p><i>Code: (TLABM35)</i></p>	<p>Taking bar models from multiplication and division through ratios.</p>
<p>Analyzing Student Work K-5</p> <p>10:15 – 11:45</p> <p><i>Code: (TTSASK5)</i></p>	<p>Using student work as formative assessment rather than only as a means of obtaining a grade for the grade book will be the focus of this workshop. Providing meaningful feedback to students and allowing then the opportunity to correct their errors leads to deeper understanding.</p>
<p>Page 4 of 10</p>	



<p>Menu Math: Setting the stage for Algebra Readiness 3-5</p> <p>10:15 – 11:45</p> <p><i>Code: (TBFMM35)</i></p>	<p>This seven-course meal provides all the nutrients necessary for students to grow strong and healthy algebraic brains while practicing skills with money and decimals. This sensible approach helps all students. Prepare for algebra by taming concepts such as variable, substitution, algebraic properties, and even equation solving. A complete handout awaits.</p>
<p>Number Sense 3-5</p> <p>10:15 – 11:45</p> <p><i>Code: (TKHNS35)</i></p>	<p>What are the benefits of strong number sense? What are some simple 5-minute strategies that you can include in your math black? This session focuses on multi-digit multiplication, long division, fractions, and the importance of a strong mental number line.</p>
<p>Algebra Tiles 6-8</p> <p>10:15 – 11:45</p> <p><i>Code: (TLAAT68)</i></p>	<p>We constantly hear we must teach using the CPA approach but many middle school teachers have never learned to use a concrete model to teach math. This session will focus on using algebra tiles, as a way to develop the conceptual understanding and as a scaffold and reinforcement for students who struggle.</p>
<p>Fractional Thinking K-2</p> <p>10:15 – 11:45</p> <p><i>Code: (TJRFTK2)</i></p>	<p>Fractions taught as of part-whole concept can ensure that students in grades K-2 have a foundation for conceptualizing other concepts in fractions. Students can begin to develop the underlying concepts associated with fractions through the use of other models and images that support fractional thinking with halves, fourths, and thirds in a variety of contexts. Participants will explore concepts with multiple manipulatives.</p>
<p>Sumboxes: Exhibitor Workshop</p> <p>12:45 – 2:15</p> <p><i>Code: (TSBEW)</i></p>	<p>Sumboxes will explore how to facilitate a game best to evaluate student understanding: what to look for when children are playing, how to encourage strategic conversations amongst players, and which questions to ask to reveal useful information about students' understanding of key concepts. Finally, we will discuss what to do with all this assessment information and how to strategically incorporate it into your upcoming lessons.</p>
<p>Analyze Student Work 6-8</p> <p>12:45 – 2:15</p> <p><i>Code: (TBFAS68)</i></p>	<p>Using student work as formative assessment rather than only as a means of obtaining a grade for the grade book will be the focus of this workshop. Providing meaningful feedback to students and allowing them the opportunity to correct their errors leads to deeper understanding.</p>

<p>Differentiation 3-5 12:45 – 2:15 Code: (TKHDI35)</p>	<p>Engaging students with different needs can be a challenge for many classrooms. What can you do when half the class is fluent with multiplication facts and the other are struggling? What are some of the strategies you can use in your classroom? This session will focus on multiplication, division and fractions.</p>
<p>Anchor Tasks K-2 12:45 – 2:15 Code: (TLAATK2)</p>	<p>Regardless of the curriculum chosen by the school or district, teachers are called upon to help students develop growth mindset and grit. Mathematical “Anchor Tasks” provide students opportunity to do both! Come and learn how to write anchor tasks for your current curriculum, whatever text you are using. Ideas for finding appropriate activities, then developing the questioning that will not only lead students to deeper understanding, Teachers will write their own tasks so bring your teachers manual. There will be a limited number of preselected lessons available.</p>
<p>Developing Number Sense K-2 12:45 – 2:15 Code: (TJRNSK2)</p>	<p>Understanding numbers and their relationships is an integral part to the development of number sense. Number sense can foster working with numbers that are not bound to rote procedures but rather are developed through a variety of experiences. Participants will engage in games and activities that focus on benchmark numbers 5 and 10, relationships for numbers to 10 to 20, and numbers to 100.</p>
<p>Sounds of Math k-8 2:30 – 4:00 Code: (TTSSMK8)</p>	<p>Research has shown that music enhances mathematical skills in several ways. Spatial-temporal reasoning improves after hearing certain types of music. Sequencing and recognition of patterns is also inherent in music. This session will provide hands-on activities and suggestions regarding the types of music that can benefit all math students.</p>
<p>Fast Facts and Fractions 4-8 2:30 – 4:00 Code: (TBFFF48)</p>	<p>Four out of three students struggle with fractions! And the other 50% struggle with their times tables. Overcoming these two hurdles is essential to success in middle and high school algebra. See how Brad helped his intervention students master all fraction operations and learn their multiplication facts through simple patterning skills that promote understanding and fluency. Complete and comprehensive handout included.</p>
<p>Connect Bar Models/Tape Diagrams to Algebra 5-8 2:30 – 4:00 Code: (TKHTD58)</p>	<p>Many students struggle with Algebra, especially word problems. How do we break the down the problem and make it visual and accessible for our students? Kar Hwee will connect the Bar Model to Algebra and how it can be extended to other middle school topics as well.</p>



<p>Square off with Geometry 3-5</p> <p>2:30 – 4:00</p> <p>Code: (TLASG35)</p>	<p>Geometric and Spatial thinking are necessary because they connect mathematics with the physical world and play a significant role in modeling phenomena whose origins are not necessarily physical. Geometry and geometric measurement standards in elementary school are often minimized. This session will help teachers mine the richness of these standards with a view to enriching student learning.</p>
<p>It is all About 10 K-2</p> <p>2:30 – 4:00</p> <p>Code: (TLWIOK2)</p>	<p>Mastering the dancing partners making 10 is the key to developing fluency. This session will focus on quick routines that require little to no prep.</p>
<p>Curriculum Mapping with the Core Knowledge Sequence, K-8 Core Knowledge Schools</p> <p>ALL DAY</p> <p>Code: (TEGCK18)</p>	<p>As stated by the Core Knowledge Foundation, “From our extensive experience working with schools, we know that the most successful Core Knowledge educators have well-documented curricula and instructional plans that guide their work.” This one-day, customized workshop, also known as “Getting Started,” is actually two workshops in one! For new-to-Core Knowledge schools, attend an overview of the principles for curriculum planning and domain mapping the Core Knowledge Sequence across the academic year, consider sample curriculum plans and maps, and begin your own. For existing Core Knowledge schools this is an opportunity to review and re-apply the 4C characteristics of Core Knowledge and revise or write grade level curriculum plans and/or domain maps for the 2018-19 school year during dedicated work time.</p>

Friday

Session Title & Code	Session Description
<p>Algorithm Study Multiplication/Division 2-5</p> <p>8:30 – 10:00</p> <p>Code: (FTSMD25)</p>	<p>Research tells us that multiple models help students develop deep comprehension and meaning in mathematics. In this session, we will explore alternative algorithms for multiplication and division, how these algorithms can help bring meaning to the standard algorithm.</p>
<p>Page 7 of 10</p>	



<p>Visualization Workshop 3-5</p> <p>8:30 – 10:00</p> <p>Code: (FLAVW35)</p>	<p>Visualization is a critical competency in the learning of mathematics. This session will provide participants opportunities to engage in visual mathematical tasks for themselves while “seeing” how these types of tasks fit into an overall instructional scheme, help to broaden the reach of any mathematics curriculum and build a culture of inquiry and growth mindset in the classroom.</p>
<p>Menu Math 6-8</p> <p>8:30 – 10:00</p> <p>Code: (FBFMM68)</p>	<p>Take your students to an even deeper understanding of algebra with this tasty approach. Students will use their experiences with fast food to learn how to use distribution, combining like terms, solve linear equations, and even solving systems of equations. Leave a handout for Monday!</p>
<p>Games for Fluency K-2</p> <p>8:30 – 10:00</p> <p>Code: (FBCGFK2)</p>	<p>When John Felling brings his dice get ready to have fun. Get ready to bring back lots of math games for centers, fluency, parent night or just to have a good time! This session will focus on games for grades K-2.</p>
<p>The Art of Language in Mathematics, K-5</p> <p>8:30 – 10:00</p> <p>Code: (FEGLMK5)</p>	<p>A general overview of key points to better understand the relevance and use of math content knowledge and skills for building vocabulary literacy in mathematics, and why this matters for successful math testing outcomes. Learn about the two keys to reading comprehension, the three tiers of vocabulary and how math standards and curriculum work together with reading comprehension strategies to benefit both student and teacher.</p>
<p>Models of Multiplication 3-5</p> <p>10:15 – 11:45</p> <p>Code: (FLAMM35)</p>	<p>Beginning with an exploration of arrays and rectangular arrays and then linking these important understanding to the area model and a variety of algorithms including the standard algorithm this session investigates each model and strategy and how to support students developing deep understanding.</p>
<p>More Power 2 You 6-8</p> <p>10:15 – 11:45</p> <p>Code: (FBFMP68)</p>	<p>Exponents will finally make sense to your students after they participate in these unique activities. Both positive and negative exponents will be demonstrated conceptually. Your students will be able to explain why $x^0 = 1$.</p>
<p>Page 8 of 10</p>	



<p>More Games for K-2 Fluency</p> <p>10:15 – 11:45</p> <p>Code: (FBCMGK2)</p>	<p>Yes! John's bag of games never ends. Get ready to bring back more math games for centers, fluency, parent night or just to have a good time!</p>
<p>Building Reading Comprehension for Math Assessments, 3-5</p> <p>10:15 – 11:45</p> <p>Code: (FEGRC35)</p>	<p>Consider and learn research- and evidence-based ways in which to improve reading comprehension on math assessments. When learning math skills, concepts and procedures, the related vocabulary embedded in the standard or word problem must also be taught and learned. Take a deep dive into grade-level specific vocabulary found in your math standards, Singapore Math and assessments. Come away with tools to change this common challenge for students "who can't read the word problems". Bring to the workshop: grade level math standards, and one Singapore Math student workbook if available.</p>
<p>Lego Math 3-5</p> <p>10:15 – 11:45</p> <p>Code: (TTJLM35)</p>	<p>Is it a toy? A manipulative? It's both! Join TJ as he takes you on a journey to using LEGOS© to reinforce conceptual understanding of fractions.</p>
<p>Math and Literature K-2</p> <p>12:45 – 2:15</p> <p>Code: (FTSMLK2)</p>	<p>Reading good math literature helps to develop number sense and leads to deep math discussions. Math vocabulary can be explored and retained through story telling. Attendees will leave with lists of math literature covering new math standard expectations, as well as ideas for how to incorporate the use of math literature into the math class.</p>
<p>Models of Division 3-5</p> <p>12:45 – 2:15</p> <p>Code: (FLAMD35)</p>	<p>Beginning with an exploration of arrays and rectangular arrays and then linking these important understanding to the area model and a variety of algorithms including the standard algorithm this session investigates each model and strategy and how to support students developing deep understanding.</p>
<p>Teaching 2-Digit Multiplication from 4th grade Through Algebra</p> <p>12:45 – 2:15</p> <p>Code: (FBFTM48)</p>	<p>Multiplication makes sense as it never has before! Beginning with the most basic levels of kinesthetic and visual instruction, Brad takes you on a seamless and incremental journey that ends with a rigorous application of multiplying binomials. Students will understand multiplication when they see this logical progression of instruction. Teachers will understand how to better reach struggling learners using this instructional style. Appropriate for grades four through algebra. A full 20-page handout is included.</p>



<p>Games for Fluency 3-5 12:45 – 2:15 <i>Code: (FBCGF35)</i></p>	<p>When John Felling brings his dice get ready to have fun. Get ready to bring back lots of math games for centers, fluency, parent night or just to have a good time! This session will focus on games for grades 3-5.</p>
<p>Comprehending Complex Word Problems on Math Assessments, 6-8 12:45 – 2:15 <i>Code: (FEGCC68)</i></p>	<p>Consider and learn ways in which to improve reading comprehension on math assessments. Learn literacy intervention strategies in which to explicitly approach complex word problems with the focus being on the specifics of math language and how to assist students with reading comprehension in the mathematics classroom.</p>

