# MATH CENTER

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## ABOUT

The FIRST Education Math Center was developed to support educators in their implementation of high quality and high impact math instruction in order to meet the needs of today's math learners. Math instruction has changed from traditional more procedural knowledge to requiring students to construct viable arguments, solve problems using multiple strategies and collaborate with each other which require a conceptual understanding of mathematics today. This is a vast pedagogical shift from how most teachers were taught to teach math. Our entire team of math consultants are currently in roles just like yours. We understand the challenges schools face today in educating our math learners. We have a proven track record of success in implementing high quality curriculum and instruction, coaching and achieving desirable student outcomes. We will work to develop and strengthen your math pedagogy by listening, collaboration, and working alongside you and your team to create a high quality, high impact math environment by providing practical and meaningful support to your teachers and leaders to bring about real sustainable change.

## CENTER OFFERINGS

### Maximizing Impact: Integrating Math Workshop in your Elementary Math Classroom (K-8)

As educators, our goal is to unlock the full learning potential of each student. Yet, the inherent diversity in our classrooms poses unique challenges within the confines of traditional teaching methods. Enter the Math Workshop – a flexible instructional framework empowering teachers to address the distinct needs of their students. This workshop model seamlessly integrates whole group, small group, and individualized learning opportunities, fostering a purposeful and deep conceptual understanding. Centered around student engagement, the focus on small group instruction creates a student-centric environment that encourages confidence, risk-taking, and active participation. This personalized approach not only promotes a sense of comfort for students but also facilitates meaningful interaction, question-asking, and constructive feedback, ultimately enhancing the overall learning experience.

### Elevating Secondary Mathematics Instruction: Innovative Strategies for Student Engagement and Conceptual Understanding (6-12)

In this session on best practices in secondary mathematics instruction, we'll delve into the art of crafting strategically planned lessons that go beyond the traditional approach. Our focus is on fostering an environment where student discourse, problem-solving, risk-taking, and inquiry take center stage, leading to heightened student engagement and a profound conceptual grasp of mathematical concepts.

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### Navigating Secondary Math Through Small Group Instruction (6-12)

As secondary math educators, our goal is to guide students toward realizing their maximum potential in mathematics, opening doors to higher levels of understanding. However, the diverse array of learners in our classrooms presents unique challenges that often surpass the capabilities of a conventional lesson structure. This session advocates for the integration of small groups and student teams into daily routines, providing a dynamic platform to address the varied needs of students.

### Unlocking Potential: Mastering Mathematics Through Small Group Instruction (K-5)

In this session, we'll explore the transformative power of small group instruction in the realm of mathematics education. By embracing this approach, teachers gain valuable insights into their students' instructional strengths and areas of need, forming a solid foundation to tailor lessons accordingly. Our goal is to meet students exactly where they are on their unique learning journey, ensuring a personalized and effective approach to understanding mathematical concepts.

### Empowering Every Student in Mathematics: Impactful Instructional Strategies for Growth and Achievement (K-12)

It's no secret that ALL students should be afforded high-quality instruction that promotes growth and achievement. This session will explore some of the most impactful instructional strategies that teachers can engage in during core instruction, and how ALL students can thrive through evidence-based practices focused on the diverse needs of the classroom.

### "Help! They Don't Know Their Facts!" Moving Beyond Memorization by Developing Fact Fluency (K-8)

Have you ever wondered why students don't know their basic facts? We have all had that thought, "if they just knew their facts..." So, what if they did know their facts, and it was built by constructing relationships with numbers and by using models and strategies that promote conceptual understanding? In this session, we will explore the difference between fluency and memorization, barriers, and how to build fact fluency through conceptual understanding and developing students' number sense.

### Making Math Equitable Through Visual Models

Educators today have a duty and responsibility to implement equitable practices to ensure that all students experience success in math. One way to accomplish this is through the use of visual models. Visual models not only increase student engagement, but also provide a way for students to make meaning of math concepts, see relationships among concepts, and provide a way to represent and communicate thinking. In this session, participants will explore several visual models used at the elementary level to increase equitable practices and ultimately improve student achievement.

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### Launching Math Workshop: How to Plan for a Successful Start

Embarking on the journey of initiating Math Workshop in your classroom might seem daunting. The initial weeks play a pivotal role in laying the foundation for a thriving Math Workshop experience throughout the academic year. In this session we delve into the intricacies of classroom set-up, cultivating a mathematical environment, and establishing routines and procedures that pave the way for a successful and impactful Math Workshop.

### How to Get Real Sustainable Changes in Math Achievement

Improving student outcomes in the area of mathematics can be arduous and fraught with challenges but definitely a necessary journey.  As instructional leaders, it takes knowledge, grit, and a systems approach to transform a school or district steeped in traditional approaches to teaching mathematics. Let's talk about how to bring access and equity to your students through investing in your teachers' learning journey that will transform classrooms into highly engaged learning spaces that support students through rigorous content and how to stay the course when faced with roadblocks and challenges.

### Unveiling the Power of Thoughtful Task Design in Mathematics Education

In this exploration, we dig into the pivotal role of well-crafted tasks in shaping mathematical understanding. Task design goes beyond mere exercises; it becomes a conduit for mathematical discovery and growth. By carefully selecting and crafting tasks, educators provide opportunities for students to engage in deep thinking, problem-solving, and real-world application. These tasks lay the foundation for a robust mathematical understanding and foster a mindset where challenges are embraced as opportunities for learning. Join us as we uncover the transformative impact of thoughtful task design in cultivating mathematical fluency and empowering students to become confident problem solvers ready to tackle the complexities of the modern world.

### Teaching with Impact: Strategies for Student Growth and a Culture of Excellence

It's no secret that ALL students should be afforded high-quality instruction that promotes growth and achievement. In this session, we will explore high-impact instructional strategies that elevate every student. Rooted in a belief that all students deserve access to exceptional, growth-oriented instruction, we'll dive into evidence-based practices that enable each learner to thrive. Attendees will walk away equipped with practical techniques to foster a culture of belonging, inspire ownership, and address diverse needs, ensuring that every student feels valued, challenged, and capable of success.

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### Breaking Boundaries: Empowering Students Through Detracking Mathematics

Do your students get placed in homogeneous high, average, low, or honors/non-honors math classes based on their perceived performance? This approach only widens the opportunity gap for minority and low-socioeconomic students, resulting in subpar experiences and missed opportunities. Tracking students doesn't genuinely enhance overall achievement; rather, it exacerbates educational inequalities. Tracking is a complex and highly debated topic in education. In this session, we will discuss the practice of tracking math students and explore alternatives to tracking that effectively bridge the existing achievement and opportunity gap in our schools.

### Fostering Productive Struggle: Effective Strategies and Tasks in your Mathematics Classroom

In this insightful session on cultivating productive struggle in your mathematics classroom. Discover the significance of promoting risk-taking, delve into the essence of perseverance, and unravel the ways in which mental stamina can be cultivated through engaging problem-solving activities. This session aims to equip you with valuable strategies and tasks to enhance the learning experience for your students.

### Exploring the Role of Teacher as a Facilitator to Foster Student Autonomy

In this session, we will explore the role of a teacher as a facilitator, equipping educators with essential skills, such as questioning techniques and strategies, to create engaging and student-centered learning environments. The traditional role of a teacher is evolving into that of a facilitator who guides, inspires, and empowers students to take ownership of their learning journey.