Math Solutions
FOUNDED BY MARILYN BURNS

Math Solutions Professional Learning

AGENDA
Supporting English Learners in Math

OVERVIEW

English learners need ongoing and explicit language instruction to access mathematical content. This course focuses on the types of support needed for English learners to be successful in mathematics. Participants gain the understanding and skills required to design lessons that increase English proficiency while simultaneously developing mathematical understanding as they analyze lessons designed for English learners. As the sessions build, participants learn how to use, and experience the benefits of, a lesson design process that supports differentiation for the varied levels of English learners in classrooms.

OUTCOMES

- Recognize the unique language development and communication needs of English learners
- Support students with varying degrees of English proficiency
- Implement lessons and instructional strategies that simultaneously build proficiency with English and promote thinking, reasoning, and making sense of mathematics

Opening

Communication and discourse among teachers and students is key to the teaching and learning of mathematics. During this session, participants identify obstacles for English learners and reflect on current strategies for meeting the needs of these students as they focus on the role communication plays in deepening mathematical understanding. The session includes an introduction to the course goals, as well as pertinent logistical information.

Identifying Language Demands and Instructional Goals to Design Lessons

Before providing specific support for English learners in mathematics, teachers first need to consider the academic and social language demands of a lesson. During this session, participants analyze how the language demands of a math lesson drive instructional goals and strategies that support the learner in understanding and producing the language needed to interact with and comprehend the content.

BREAK

Intentional Communication Strategies for English Learners

Instructional strategies for English learners should be intentionally designed to promote communication across the four language domains of speaking, reading, listening, and writing. In this session, participants experience a geometry lesson that demonstrates the integration of language routines and communication strategies that simultaneously build proficiency in English and mathematics.

LUNCH

Designing Effective Lessons for English Learners
Teachers can help articulate and solidify students' thinking by embedding intentionally designed, language-rich instructional strategies into their lessons and by aligning math and language goals to the vocabulary and instructional strategies of the lesson. In this session, participants experience a math lesson developed for native English speakers and then learn to use a lesson template to design lessons that support the varied communication needs of English learners.

BREAK

Transforming Lessons to Support English Learners
During this working session, participants apply what they've learned as they practice modifying a lesson, specific to the grade level they teach, to support the English learners in their classrooms. Participants use a lesson-planning template to guide their modifications, and then collaborate with others to refine their ideas.

Closing
Participants take time to reflect on the experiences of the day and ways that these experiences will positively impact their classroom instruction.

Math Solutions Guiding Principles
Drawing upon academic work and our own classroom-grounded research and experience, Math Solutions has identified the following four instructional needs as absolutely essential to improving instruction and student outcomes:

- Robust Content Knowledge
- Understanding of How Students Learn
- Insight into Individual Learners through Formative Assessment
- Effective Instructional Strategies

These four instructional needs drive the design of all Math Solutions courses, consulting, and coaching. We consider them our guiding principles and strive to ensure that all educators:

- Know the math they need to teach—know it deeply and flexibly enough to understand various solution paths and students' reasoning.
- Understand the conditions necessary for learning, what they need to provide, and what students must make sense of for themselves.
- Recognize each student's strengths and weaknesses, content knowledge, reasoning strategies, and misconceptions.
- Have the expertise to make math accessible for all students, to ask questions that reveal and build understanding, and help students make sense of and solve problems.