

**AGENDA*****College and Career Ready Course:  
Supporting Leadership Excellence*****OVERVIEW**

This full-day course provides leaders with insight into the current state standards based on the ideas of college and career readiness and a vision for classroom implementation. Participants learn what to look for during classroom observations to assess instruction in the “processes and proficiencies” outlined in the standards, as well as ways to support teachers as they begin to incorporate the standards into their classrooms.

**OUTCOMES**

- implement changes in mathematics instruction called for by current standards;
- identify and support math instruction that promotes communication, problem solving, and important math content; and provide instructional leadership and support for teachers to improve their mathematics instruction.

**OPENING—WELCOME, LOGISTICS, AND EXPERIENCES**

Participants are introduced to the session goals and an overview of expectations for student practices found in current state standards.

**HABITS OF MIND OF MATHEMATICAL THINKERS: WHAT DO THEY LOOK AND SOUND LIKE?**

Participants delve more deeply into habits of mind of mathematical thinkers—constructing viable arguments and critiquing the reasoning of others, and modeling with mathematics—by identifying and sharing how the students use these processes. Following the experience, participants discuss strategies for helping teachers implement these into their daily practice.

**ASPECTS OF LEARNING**

The intent of current standards is to move toward greater focus and coherence in math teaching and learning. This part of the day provides an opportunity for leaders to comprehend that students must reason about and make sense of mathematics and recognize that the focus and progression of standards allows for the time needed to develop students’ conceptual understanding and skills.

***Break*****COMPARING MATHEMATICAL TASKS**

Participants engage in and reflect on two different mathematical tasks. They compare and contrast the two tasks, identifying characteristics of tasks that require the learner to use thinking, reasoning, and problem-solving skills. The two tasks focus on the mathematical concepts of area and perimeter.

**THE ROLE OF COMMUNICATION IN THE LEARNING OF MATHEMATICS**

Using the game *The Three Sacks Problem*, participants examine the role that classroom communication plays in the learning process. They learn about various formats for Math Talk and five specific strategies for promoting classroom discussions.

**IDENTIFYING WHAT TO LOOK FOR IN MATH CLASSROOMS**

To build stronger instructional programs, school leaders need to know how to look at the mathematics instruction in their schools' classrooms. Collaborating with colleagues and using their experiences on a task that they will see students working on, school leaders identify aspects of instruction that affect understanding and reasoning. They use the aspects they've identified to view, analyze, and discuss a videotaped classroom lesson.

**REFLECTION AND CLOSING**

Participants develop their mathematical leadership voice as they make actions plans for their work.

**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.