

**AGENDA****Leading the Transformation of Mathematics Teaching and Learning****OVERVIEW**

This course refines participants' vision for their role as instructional leaders of mathematics. Participants increase their understanding of and ability to communicate about current state standards. They engage in mathematical tasks and discover the use of tools and structures to lead stakeholders toward effective mathematics teaching and learning.

**OUTCOMES**

- Identify and support math instruction that promotes thinking, reasoning, and sense-making
- Provide instructional leadership and support to empower teachers to become more effective in their teaching of mathematics
- Articulate a vision for leadership that includes collaboration among all stakeholders to promote effective mathematics teaching and learning.

**DAY ONE****Opening**

This introduction includes examining course learning outcomes, building community, establishing of norms, and providing an overview of the significance of mathematics education in the 21<sup>st</sup> Century.

**Session Tasks**

- Quick Surveys
- Math by the Numbers

**Creating a Vision**

Participants consider their personal math experiences and focus on how the teaching and learning experience influences the mathematical trajectory of the learner.

**Session Task**

- Math Stories

***BREAK*****Engaging with Effective Instructional Practices**

Participants explore a mathematics problem with opportunity to utilize multiple representations as they consider the kinds of classroom experiences students need to learn mathematics as described in today’s rigorous standards. They reflect using the Instructional Practices Inventory to connect the experience to their role as an instructional leader.

### **Session Tasks**

- The Border Problem
- Reflecting with the Instructional Practices Inventory

### **LUNCH**

### **Cultivating Instructional Leadership**

The Instructional Practices Inventory is a powerful tool that participants can leverage to impact mathematics instruction. Participants use the tool as a lens for observing and providing feedback about mathematics instruction.

### **Session Tasks**

- Discussing the Focus and Coherence Indicators
- The Newspaper Club Problem
- Classroom Walkthrough Task (Video clip 5c, *The Newspaper Club Problem*)
- Video clip 2.1, *Math Content Learning Team in Action*

### **BREAK**

### **Planning for Sustainability**

Change occurs as a process, not as an event. In this session participants discuss the change process and plan next steps by reflecting on three guiding principles for leaders to tackle change.

### **Session Tasks**

- Tidy Events and Messy Processes
- Article, “Leading Change”
- Conducting Ten-Minute Meetings

### **Closing**

Participants make a plan for extending their learning, reflect on the experiences of the course, and provide feedback.

### **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 to help students make sense of and solve problems