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Job-Embedded Coaching

Professional Learning to Improve Math Instruction

Founded by Marilyn Burns, Math Solutions has been focused exclusively on supporting teachers in mathematics instruction for 35 years. Job-embedded coaching for individuals and teams of educators is the most effective way to sustain professional learning, improve instruction, and build capacity.



From Houghton Mifflin Harcourt

Students succeed in mathematics with solid thinking, reasoning, and sensemaking skills. Improving students' understanding of mathematics is at the center of Math Solutions coaching.



Customized Coaching Services for Individuals and Teams

Our job-embedded coaching for individuals and teams drives innovation and instructional improvement and provides the tools for your teachers to transform theory into practical classroom practice.

Individual Coaching: Educators work side by side with Math Solutions coaches-- enabling them to integrate new skills immediately into their practice.

Team Coaching: Builds a community of learners through collaboration. It is the fastest way to synchronize your teams across grade levels, share experience and expertise, and collaborate.

Math Solutions will also develop the coaching expertise of your teacher leaders and instructional coaches so they continue the growth for school-wide capacity.

FOCUS	IDENTIFIED NEED	OUTCOME
Instruction	When there is a gap between teachers' knowledge and their implementation of programs and/or instructional strategies, resulting in student learning gaps.	 Make intentional decisions about implementing research-based instructional practices. Reflect on planning and instructional decisions. Develop explicit questioning strategies to elicit student thinking and understanding. Make instructional adjustments as needed. Cultivate a growth mindset learning community using communication and feedback strategies.
Content	When teachers need content-specific support to learn curriculum, assessment strategies, or pedagogy.	Strengthen content knowledge.Develop content skills to support effective instruction.
Data	When teachers have access to assessments and data but do not yet use the available data to make decisions about classroom instruction.	 Analyze student results to plan for differentiated instruction. Design and refine assessments. Use instructional routines as a formative assessment tool to identify common patterns of student thinking and to adjust instruction accordingly. Plan instruction in response to assessments and data.
Lesson Modeling	When teachers and leaders would benefit from observing, planning, and discussing highly effective lessons with an expert in math instruction.	 Lesson Pre-Brief—coach and teachers co-plan the lesson he/she will teach. The Math Solutions coach might teach or co-teach the lesson with the teacher. The Lesson—Math Solutions coach teaches the lesson to a class of students, while teachers observe with a specific focus identified during the lesson planning sessions. Lesson Debrief—Math Solutions coach facilitates as teachers collaborate to debrief the lesson with a focus on student learning and student misconceptions, identifying specific aspects and strategies used that supported student learning. Finally, the team reflects on next instructional steps for students.

Our Coaching Model

Math Solutions coaching is designed to deepen teachers' math content and pedagogical knowledge in order to promote rigorous instruction for all students. Based on district goals and student work, coaches and teachers work collaboratively to set and meet goals to improve teaching skills and student learning.

Coaching is an art and a science. Planning, analysis of student work, and progress monitoring are an integral part of the coaching cycle.



The Instructional Practices Inventory– Best Practices for Teachers and Students

Based on 35 years of focusing exclusively on the teaching and learning of math, Math Solutions has identified four key areas of instructional focus to reach math achievement goals: learning environment, reasoning and sense-making, focus and coherence, and formative assessment. Math Solutions coaches will guide you to recognize what a model classroom looks like with examples for both teachers and students.

	Teacher Best Practice	Student Learning Practice
	Provides a respectful, safe learning environment in which mistakes are seen as an opportunity to learn.	Takes an acade thinking of Takes an academic risk and relies on their owr
Asks questions that both build and reveal new understanding of content and practice. Avoids yes/no questions unless they also ask for justification.		Listen and ask respectfully changes and the thinking of other students.
		Explain their reasoning; construct viable arguments and critique the reasoning of others.
	Makes appropriate tools available and encourages their use.	Communicate using appropriate mathematical language both orally and in writing.
		Work well in a variety of grouping structures.
	REASONING AND SENSE-MAKING	
	Teacher Best Practice	Student Learning Practice
	Selects rigorous learning experiences.	Persevere in making sense of rigorous problems.
	nts without	Seek out multiple approaches to solving a problem.
Se a p	elects learning experiences that represent balance of conceptual understanding and rocedural fluency.	Uses multiple representations when solving problems, such as symbols, diagrams, graphs words, etc.
	conceptual understanding and procedural fluency.	Use appropriate tools strategically, including mental calculations, that fit the situation.
		Look closely to discern a pattern or structure.
	FOCUS AND COHERENCE	
	Teacher Best Practice	Student Learning Practice
U	Understands the expectation of the standard to be taught and its nderstands the expectation of the standard	Connect their current learning to previously learning to previously
to be taught and its connection to previous standards; aligns the lesson to grade-level content and practice standards.		Use math to co
		Apply the math they know to solve real-world problems.
	Selects problems that provide opportunities for students to apply math to real-world situations.	
	FORMATIVE ASSESSMENT	
	Teacher Best Practice	Student Learning Practice
Uses data to make instructional decisions based on student need.		Take responsibility for their learning by monitoring their progress toward a learni Evaluate the teacher or a peer.
-	Id Identifies and communicates the learning target(s) of the lesson.	Articulate what they are learning and why.

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