

## Case Study #2:

Harrison Public Schools, New York



**How did an eighth grade math team almost double the number of students who achieved at the highest levels on state math tests?**



**By identifying each student's preferred approach to learning math and giving teachers the tools and strategies to differentiate their math instruction.**

The teachers in the Math Department at Louis M. Klein Middle School in Harrison, New York, use the New York State Standards as an accountability measure. In examining their curriculum, they appropriately address the required state elements. However, these teachers also recognize that students are as important as standards and now apply the tools and strategies of the Thoughtful Classroom model to identify the learning needs of their students. Their increasingly varied and focused instructional and assessment choices demonstrate an understanding of student diversity that promotes student achievement while remaining manageable for secondary instructors with multiple classes.

The seventh graders identify their preferred style of learning when studying mathematics and can describe their own style of problem solving. They jump into the world of math with an awareness of who they are as an individual learner, conscious of their strengths and weakness in mathematical thought and practice. They can work more confidently in teams to pool their knowledge or individually to strengthen their own strategies for approaching the math content.

Teachers use the results of the *Math Learning Style Inventory*\* to plan standards-based lessons that address how their students learn best. A Thoughtful Classroom coach returns regularly to their classrooms to facilitate teachers' use of specific math-based strategies that are needed for all students to master the required knowledge and skills. Focusing on multiple ways to introduce, practice, and assess these skills has produced greater student achievement.

### The results are in...

The TONYSS are predictive tests that suggest the level of achievement on the subsequent year's state tests. The chart below illustrates the gains made by the same group of students in one year with a learning style approach to mathematics instruction. The percentage of students achieving at the highest level almost doubled, rising from 21% to 39%, while the percentage of students in the lowest performing group decreased dramatically from 7% to just 2%.

\*Thomas, E., Silver, H., & Perini, M. (2003). *The math learning style inventory for secondary students*. Ho-Ho-Kus, New Jersey: Thoughtful Education Press, LLC.

### Results from New York State Performance Assessment Tests

<b>NYSED Level 8<sup>th</sup> Grade</b>					<b>Test Date</b>
	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Spring, 2004</b>
<b>n=256</b>	101	122	27	6	
<b>%</b>	39%	48%	11%	2%	
<b>TONYSS 7<sup>th</sup> Grade</b>					<b>Test Date</b>
	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Spring, 2003</b>
<b>n=267</b>	55	135	64	21	
<b>%</b>	21%	56%	16%	7%	

**Key:** 4=Exceeding standards 3=Meeting standards 2=Need extra help 1=Serious academic deficiencies

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