



Clark Lane Middle School

Pride in our Behavior, Learning & Community
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Start with the Why: In the 2015-16 SY Clark Lane Middle School Math achievement was the lowest in the district and lower than the state average, while all other grades were performing well above the state average.

Solving the Problem:

2016-17

- Building administration undertook a review of how math was being taught and sent a team to the elementary schools to see the Math Workshop process and how math was taught at that level.
- A review of the Math interventions in place and their effect on learning and closing the achievement gap was undertaken.

2017-18

- Waterford Board of Education increased the position of Math Instructional Coach from half time to full time.
- The district charged the Math Instructional Coach to lead the department for materials that better support the teaching and learning of the math standards as defined in the curriculum and state standards.
- The pilot process began with looking at middle school math programs used by other successful districts in the state and meeting with various vendors.
- District non-negotiable → All the recommended instructional materials reviewed through the <https://www.edreports.org/> site.
- Only the top tiered instructional resources as indicated from Ed Reports were allowed to be piloted. Three resources were piloted throughout the Math department. An instructional materials selection was determined by the end of the school year.
- A school-wide focus on tiered intervention support and mastery based learning, also occurred this year, which led to an increase in student outcomes.

2018-19

- The entire Math department implemented a full year pilot of Illustrative Math (IM)
- The Math Instructional Coach engaged in monthly webinars with the creators of Illustrative Math (IM) text.
- Math Instructional Coach designed a schedule to get into each math teacher's classroom daily. (8 math teachers across 600 students in 32 classes)
- Math Instructional Coach modeled, co-taught & provided feedback to teachers about their implementation of the lessons and units
- Math Instructional Coach organized and trained teachers with regards to all new resources; Planned all units with teachers (facilitated release time)
- Math Instructional Coach conducted frequent discussions with department about pacing and prioritizing of content and lessons (through weekly PLC)
- Math Instructional Coach and Math Curriculum Leader worked with administration and teachers to deeply analyze SBAC and MAP data to determine trends, needs and intervention areas of concern.

Results: Since the 2015-16 SY, Clark Lane Middle School realized a 15.8 percentage point increase in grade 6 Math achievement; an 18.8 percentage point increase in grade 7 Math achievement; a 20.8 percentage point increase in grade 8 Math achievement.

District and State Grade Level Performance of Levels 3 or 4 on SBA Math 2015-19

Grade	2015-16		2016-17		2017-18		2018-19	
	Waterford	State	Waterford	State	Waterford	State	Waterford	State
03	71.1	52.8	63.7	53.1	70.1	53.8	77.8	55.0
04	58.4	47.9	56.3	50.0	65.6	51.3	65.7	52.5
05	49.2	40.8	49.4	42.9	53.2	45.0	61.3	46.5
06	51.5	40.6	50.2	43.6	54.0	43.9	67.0	45.4
07	39.6	41.8	55.1	42.7	44.3	44.1	58.4	46.1
08	40.2	40.3	45.6	41.8	55.0	43.0	61.0	43.5

Illustrative Math Design Principles (2018-Present)

Invitation - Deep Dive - Synthesis: Every Lesson, Every Unit, Entire Program

There are multiple activities for each lesson. Every lesson begins with a warm-up activity and is then followed up with two to three activities designed around the objective for that particular lesson. Students work alone, then in pairs or groups to complete the task at hand. The teacher is able to circulate the room and monitor progress, clear up misunderstandings, and keep groups focused on moving forward. In many activities the teacher sequences and selects students to share based on complexity of understanding of the content. The teacher will then synthesize and connect ideas from all students in order to foster a deeper understanding of the lesson objectives for that day.

Use of Technology (2018-Present) - The Illustrative Math program partnered with Khan Academy to provide online homework options for students. Teachers are able to assign meaningful practice for students to work on independently, receive immediate feedback, and are able to redo as needed. Students were also provided a small amount of class time during the week to work on assignments with teachers present to reteach, clarify, and monitor progress.

The Instructional Core at Work

<u>Student:</u>	<u>Teacher:</u>	<u>Task:</u>
<ul style="list-style-type: none"> ➤ Doing the heavy lifting ➤ Working independently and in groups to solve problems ➤ Reasoning about the math ➤ Sharing their understanding ➤ Working to see connections between solutions, tasks, units ➤ Working towards mastery through independent practice (HW) 	<ul style="list-style-type: none"> ➤ Shift in structure of lesson delivery ➤ Facilitating discussions ➤ Synthesizing ideas ➤ Direct teaching at lesson end, not start ➤ Use of online tools and strategy groups for Tier 1 supports 	<ul style="list-style-type: none"> ➤ Quality Instructional Resource ➤ Problem-solving based ➤ I do, we do, teacher does ➤ Anticipate, monitor, select, sequence, connect ➤ Daily formative assessment available ➤ Redo / Retake Procedure in place

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