

Grade 5 Math Pilot

Presentation to Grade 4 Abbot Parents/Guardians

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A photograph of four diverse students sitting on a carpeted floor, looking up at the camera. They are surrounded by several open spiral-bound notebooks with math problems and diagrams. In the background, there are blue storage bins, one of which has a label that reads "30-39 All Cases".

Agenda

- Brief history of math in Westford
- What is Guided Math?
- Challenging ALL students
- How the pilot will affect Abbot students
- Questions

Evolution of Math Instruction for Advanced Learners in WPS

- Gifted Program

- Reached a limited number of students
- Differentiation was “extra” and not the norm

- Accelerated Math

- Reach more students-anyone who qualified: 30-40%
- Accelerated instruction embedded in daily learning
- Emphasis on speed of learning: same assessments and curriculum

Continuing the Evolution: Abbot Pilot

- Replace Accelerated and Standard Math with Guided Math for Grade 5 at the Abbot School
- Motivation came from teachers
- Meet the needs of ALL students using this model

How Did We Get Here?

- K-5 Professional Development: guided math and differentiation using small group instruction
- A new math program that is adaptable
- Best practice
- Student engagement

Why Pilot a Change to Accelerated Math?

- Research does not support tracking in elementary school
- Anxiety levels of students: both those in Standard and Accelerated
- Speed of learning $\neq$ math ability
- Lack of flexibility
- Advanced math learners will continue to be challenged at their level
- We can meet needs in another way...

Guided Math

Guided math provides a structure for teachers **to differentiate instruction** so they can *reach and teach* every student by:

- Creating flexible groups: tailoring instruction to students' instructional levels
- Creating activities that tap into students' *individual learning styles and interests* so they stay engaged
- Providing *immediate feedback*

- Questioning students in small groups: *opportunity to talk* with their peers, *ask questions* and *justify their mathematical thinking*
- Allowing teachers to *re-teach*, *reinforce*, *expand* and *compact* concepts, strategies and skills
- Providing short lessons that emphasize *conceptual understanding*, *procedural fluency* or *problem solving*
- Ultimately providing students with the self confidence they need to become successful mathematicians

Guided Math groups are organized according to the common needs of a specific group of students in a certain place and at a certain time...

Guided math groups are flexible, meaning that they change over time. As students achieve particular knowledge and skills, the teacher moves the students to different groups.

Dr. Nicki Newton, *Guided Math in Action*, 2013

How Will Advanced Learners Continue to Be Challenged?

- Primary mode of instruction is small group
- Cluster students of like ability on the concept being taught
- Groupings are fluid based on strengths and needs
- Technology: Dreambox is adaptive software

What Teachers Are Saying ...

“I have to say I am thrilled with their assessments! I have never had students retain as well as this group. I am a happy member of the Guided Math Fan Club and Nicki N.'s gamification!”

“Guided math is a lot of work and I know I still have a lot more work to do- but it is clear that this is much better for the students so I can't go back to whole group instruction.”

“I know my students as mathematicians so much better!”

“I gave the math mid year today with no review because I wanted to check to see how they would do without it... I feel by doing guided math and individualizing my groups they should be able to do well. I was so happy! As a class they did very well! ...Never thought I'd say that guided math is the way to go! It is so much work but this mid-year has shown me every bit of the work has been worth it.”

“Students love math now! They are disappointed if we are not using math groups.”

“Eliminating accelerated math allows for more flexibility in scheduling, and fewer lost teaching days due to field trips and early release days....It's absolutely possible to reach those accelerated students without pulling them into a leveled class.”

“Classrooms can be differentiated instead of the entire grade level. It has a very negative psychological affect on kids who do not make it in. It's too early in their school career for that kind of 'rejection'.”

Sample Schedule

	Rotation 1	Rotation 2	Rotation 3	Rotation 4
A				
B				
C				
D				

Teacher	Technology	Paper and Pencil	Hands On
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- Begin with whole group mini lesson/warm up
- Break into Groups A, B, C, D
- Regroup whole class for wrap up
- Each teacher session is tailored to meet that particular needs of the particular group of students.

How Will Abbot Students Be Affected?

- Grade 4 students will take the same assessments and receive the same parent letters with student scores
- Each grade 5 classroom will have a cluster of students that meet the accelerated math qualifications
- End of grade 5, Abbot students take the same assessments and will meet the same qualifications for placement in Accelerated math in middle school

Quotable Quotes From Experts in the Field

“At the K-8 level there is no “new math,” but there are “new” research-informed instructional strategies!”

~Matt Larson, NCTM President, 2016

“When mathematics is taught with an attitude of elitism and is held up as being harder than other subjects and suitable only for the gifted few, a tiny subset of those who could achieve in mathematics—and the scientific subjects, which require mathematics—do so.”

~Jo Boaler, 2015

“The labeling of students as gifted hurts not only the students who are deemed as having no gifts but also the students who are given the gifted label, as it sets them on a fixed mindset pathway, making them vulnerable and less likely to take risks in order to avoid making mistakes and potentially losing their gifted label.”

~Jo Boaler, 2015

“Some of the world’s greatest thinkers, scientists, and mathematicians have not been fast at arithmetic, even though they were tremendously successful in working with higher-level mathematics.”

~Cathy Seel, 2009

“All students are now expected to complete a core curriculum that has shifted its emphasis away from computation and routine problem practice toward reasoning, real-world problem solving, communication, and connections.”

~Dana T. Johnson, 2004

Questions
or
Comments?