Halton District School Board—Ontario, Canada

School Board Doubles Math Learning for Grade 4 Students

Extends Learning Beyond the Classroom

RESULTS AT A GLANCE

During the first year using DreamBox Learning® Math grade 4 students experienced nearly a year and a half of growth within the curriculum—followed by two years of growth during the second year. Students are not only better able to connect learning concepts to real-world concepts, but parents are also more engaged in their child’s learning at school and at home.

“...the students can easily relate what they do in DreamBox with the instruction they are receiving from their teacher.”
— Terri Blackwell
Principal of School Programs
Halton District School Board

CHALLENGE

Improve math proficiency by building a strong conceptual foundation

Recognizing that building a strong conceptual foundation was necessary to increase grade 6 math proficiency, the district focused its efforts two years earlier—on grade 4 math—adopting research-based practices and increasing opportunities for deeper learning that align with the district’s vision for personalized, adaptive instruction.
“Research in math instruction points toward a need to personalize learning and differentiate instruction,” remarks Terri Blackwell, Principal of School Programs in the Halton District School Board. “To do this effectively, we needed to create an inclusive culture that supports our students, our teachers, and our parents.” The challenge, however, is creating a scalable, sustainable way to:

- Provide opportunities for teachers to develop new strategies for teaching conceptual understanding of mathematical concepts
- Extend math learning beyond the school day by engaging parents in student learning

SOLUTION

**Translate online teaching and learning strategies to classroom instruction**

“To achieve our goal, we realized that we needed to add a digital component to our curriculum that aligned with the district’s instructional vision,” Blackwell explains. “Halton is increasing the emphasis on integrating teaching strategies that focus on using number sense and conceptual understanding. For example, students often work on mental math problems in their head through strategies learned via manipulatives.”

Halton chose DreamBox Learning Math, which is aligned to the Ontario Curriculum Expectations, as the online adaptive learning solution for the district and the primary means of engaging students virtually in sense-making math experiences. Adaptive learning is key in any blended learning strategy, but especially in the rotation model that Halton employs. During the school day, students move between whole group instruction and independent work in DreamBox, which adapts to their specific instructional needs whether they require additional support or are ready to accelerate.

**Increase family engagement**

Ease of use and access via the web across multiple devices means students can continue to play DreamBox at home, also serving as a springboard to generate more engagement from the families in the district.

Parents not only receive regular automatic email updates from DreamBox regarding their child’s learning progress, they also participate in frequent parent seminars hosted by Blackwell, where she explains the district’s overall math strategy and how DreamBox fits into their goals for the students. “It’s important to provide information to parents in how DreamBox supports the Board’s Math Plan, as well as the connections with the instructional strategies that teachers are using in the classroom. We have also provided this learning in a webcast to differentiate ways of engaging our parents,” Blackwell offers.

The school board recently surveyed families about the new direction in math instruction. The majority of parents said their students were using DreamBox for at least 30-60 minutes per week at home, and most noted that their child’s confidence in math is improving.

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**DREAMBOX LEARNING MATH IMPLEMENTATION**

- Focuses on grade 4 students and connecting parents with math learning
- Supports a rotational Blended Learning model, as well as whole group, and small group instruction
- Requires usage at home

**HALTON SCHOOL BOARD FAST FACTS**

- Grades K–12
- 86 Elementary Schools

“**Our teachers are beginning to use ten frames, number lines, arrays, and math racks in their instruction and when modeling student thinking in Number Talks. “They really like how DreamBox uses similar models, and strategies in its instruction.”**

— Terri Blackwell
Principal of School Programs
Halton District School Board
RESULTS

24/7 learning that puts strategic goals within reach

Halton quickly realized the benefits of creating a greater school-to-home connection for their students. Within the first year of incorporating DreamBox, grade 4 students experienced nearly a year and a half of growth within the DreamBox curriculum. The momentum continued during the second year with students experiencing over two years of growth.

“With DreamBox Math the way students learn concepts and the way teachers teach them has improved, in that the models students use in DreamBox are the models teachers use to represent student thinking.” says Blackwell.

“The ideas of adaptive learning and comprehensive differentiation are based in research and complement the latest strategies that we’re adopting in our district, like manipulatives and blended learning. DreamBox Learning Math is adapting all the time, so it complements our teachers’ methods.”

— Terri Blackwell
Principal of School Programs
Halton District School Board