

TDSB Superintendent

Superintendent | Ontario | Toronto District School Board

Constructing Grade 1 Students' Math Skills with Mathology

Superintendent Shares Schools' Success with Mathology

How can schools address low provincial math scores, students (and teachers) with math phobias and the need for more engaging math activities? A [Toronto District School Board](#) superintendent says Pearson's [Mathology](#) program is part of the solution.

As the TDSB superintendent explains, while teachers receive intensive support for literacy instruction, support for math instruction is often lacking. But by using the Mathology program teachers gain more robust guidance, tools and support for math instruction.



“We want all of our students to be able to understand the math, we want them to be able to play with the math, because that leads to them loving the math which then leads to them having confidence in the math. Because we have so much math phobia, even when they’re little. And Mathology is a scaffolding that supports that goal.”

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Supporting teachers

Using [Renewed Math Strategy](#) dollars or budget money, 16 elementary schools in the superintendent’s region purchased Mathology Grade 1 Full Kits and K-3 [Mathology Little Books](#) in January 2018. Since then the superintendent has seen teachers gain both guidance and confidence in math instruction.

“Mathology is a comprehensive program that helps build the teacher’s math content knowledge while the kids can learn math in an engaging way. It provides professional and student learning together,” explains the superintendent.

“Mathology helps them [teachers] set up centres, set up games and pick good literature. It has all the components of a balanced math program, and it’s very straightforward for teachers.”

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“It also helps teachers have a variety of ways to approach math, so it’s not all whole-group. Mathology helps them set up centres, set up games and pick good literature. It has all the components of a balanced math program, and it’s very straightforward for teachers.”

One specific piece of the Mathology program the superintendent says teachers find helpful is the assessment support. When assessing students teachers can use “What to look for” charts to assess and determine the next steps for any student in the class.

“Teachers can actually be very responsive. If a student is struggling, that chart is going to tell the teacher how to address that. If a student is really bright and already gets it, it’s going to give ideas for that too,” explains the superintendent.

Helping students construct math skills

While teachers and students have only been using Mathology for a few months they're already reporting benefits.

One major change is teachers have moved away from low-level thinking worksheets that don't support the development of 21st Century Skills toward using Mathology's components—such as the Mathology Little Books and Activity Kit—to differentiate for students and help them construct math knowledge.

"We know kids learn from constructing their learning and Mathology really is a constructivist program where kids construct their own learning in many different ways—as a whole class, in a small group, individually and through lots of games, engaging literature, interesting questions and interesting practice."

"With a nice open question or a game, kids can enter at different ability levels and be successful. They have to think and they have to reason and they have to problem solve. The tasks in Mathology, provide many entry points for students at all levels," explains the superintendent.



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Tips for successful implementation

The superintendent attributes such quick adoption and the resulting benefits to the effective professional learning available with Mathology.

Teachers, principals and vice principals attended two days of professional development together filled with hands-on learning and led by an education consultant. Principals and vice principals had an additional half day of professional development on their own.

"I think the key part was the administrator attendance. If the administrator has a good understanding of what the program is like and what kinds of things they should be looking for in the classroom—then first, they can watch for those things and second, if they're not seeing it, they can provide support.

"Mathology is a comprehensive program that helps build the teacher's math content knowledge while the kids can learn the math in an engaging way."

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Going forward

For the 2018/2019 school year, the superintendent reports schools in her region will provide more Mathology-based professional learning for teachers. Many have also set aside the budget to purchase the Mathology Grade 2 Kit to create continuity in their math instruction.

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