

## Mathematics/Numeracy in TDSB Schools

Ongoing support and professional development is provided to teachers from across the system. A key area of focus for professional development is on effective strategies for teaching a balanced mathematics program. The professional development places an emphasis on strategies for teaching problem-solving skills and for developing communication skills.

The cornerstone of our professional development for elementary teachers, grades Kindergarten to Grade 6, is the **Early Years Numeracy Project**. The implementation of The Early Years Numeracy Project involves:

- Regional and school-based professional development for over 500 Kindergarten to Grade 6 teachers focusing on building in-depth knowledge of the curriculum, how students learn math and effective teaching and assessment strategies
- Working with Special Education Teachers who teach children who challenged by the demands of the math curriculum and as a result have gaps in their skills.
- Financially assisting school each in building a Math Resource Room with student materials to support meaningful and engaging instruction.
- Supporting schools in determining how best to involve their communities in helping children learn mathematics

Presently there are 26 schools in the second year of a three-year program and addition 22 schools are just now entering their first year.

The TDSB Mathematics Department will continue to support the implementation of both the Ministry of Education **Early Math** and **Junior Math Strategies**. Lead teachers from every school have learned about exemplary mathematics instruction and assessment in the mathematics classroom.

A number of summer institutes have been designed to address curriculum, instruction, and assessment in mathematics. They focus on helping teachers make effective use of the resources, such as, manipulatives, computers and calculators, and print materials.

A summer institute called **math-e-motion** was conducted for teachers in Grades 6, 7 and 8 to help them strengthen their teaching methods in mathematics. **math-e-motion** is a 5-day summer institute for teachers and camp for students. Both teachers and students engage in learning mathematics through inquiry and problem solving. One aspect of the uniqueness of **math-e-motion** is its integration of professional development for teachers with instructional practice in a safe environment. The institute culminates in a showcase of mathematical thinking by both teachers and students.

The mathematics department organizes **Mathematics Adventures for Students in Grades 7 and 8**. Over fifty teachers and two hundred Grades 7 and 8 students have attended Mathematics Adventures at four TDSB Outdoor Education Centres (residential) over the last two years. In this model, teachers work intensively with students are those who tend to struggle with mathematics and require strong support for learning. The teachers then participate in workshops to discuss inquiry learning, the use of manipulatives and technology, rich assessment and evaluation, and differentiated programming.

The mathematics department provides training for **Knowing Mathematics**, an intervention program that aims to accelerate students' skills in Mathematics through an intensive 13-20 week program.

A key focus to help **New Math Teachers** in developing their professional practice will be initiated. In particular, emphasis will be directed towards highlighting practical strategies for teaching key concepts in mathematics (e.g., Algebra) and developing exemplary assessment and evaluation practices in the area of mathematics.

Support for secondary school **Curriculum Leaders and Assistant Curriculum Leaders** will be provided through opportunities to learn about board and ministry initiatives, to work together to critically examine mathematics learning materials, and to investigate problems that will allow them to discuss pedagogy and methodology with other math leaders.

Through participating in **Families of Schools Transition Committees/Teams**, Mathematics Instructional Leaders will help to integrate current Ministry and Board policies and guidelines with Families of Schools priorities in the area of Mathematics and Numeracy. Some of these resources are *Targeted Implementation and Planning Supports for Revised Mathematics* - classroom materials for Grades 7, 8, 9 Applied and 10 Applied Mathematics, the Revised Secondary Mathematics Curriculum, and the Board Assessment and Evaluation document.

The mathematics department will continue to work with those teachers who instruct Essential Level Courses (also called “Locally Developed Credit Courses”) to help them improve student learning with those who typically struggle with mathematics.

Additional exemplary mathematics assessment materials are displayed at all workshops and institutes, and schools are encouraged to purchase copies for teachers. Similarly, schools are expected to provide all students with current mathematics textbooks.

Many schools in the Toronto District School Board also reach out to parents through **Family Math** programs.

In addition to system-wide initiatives, each school has specific actions and plans in place. Parents are encouraged to discuss these plans with their local schools.

**For more information:**

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