

Toronto District School Board

Policy P.004 CUR:

Mathematics Foundation

Statement

Mathematics reveals patterns, order and relationships which help us to understand the world around us. It is an increasingly varied discipline that deals with number, spatial sense, data, measurement, and observations requiring inference, deduction, modelling and communication. Mathematics is of fundamental importance in the workplace and in personal life contexts. Today, mathematical concepts are rapidly expanding into many other subject disciplines. Effective classrooms are places of inquiry where mathematics learning is fostered, where teachers are inspiring, knowledgeable in mathematics and skilled in creating rich learning environments.

The Toronto District School Board identifies the teaching and learning of mathematics as a priority and is committed to providing support so that all learners achieve at the highest academic levels.

The Toronto District School Board believes:

1. That mathematics encompasses a broad range of knowledge, skills and dispositions. It provides learners with the tools to perform every day transactions, to understand public policy issues, to appreciate the mathematics in recreation, science, geography, history, social studies, the arts, etc. to seek employment and to prepare for post-secondary studies.
2. That the mathematics curriculum includes strands such as data management and probability, geometry and spatial visualization, measurement, number sense and numeration, and patterning and algebra. Learners are expected to develop skills in solving problems, applying mathematical concepts and procedures, and in reasoning and communicating mathematically. They are also expected to value mathematics as a significant human endeavour and to develop confidence in their ability to do mathematics.
3. That all learners must be encouraged to take mathematics courses and to achieve at the highest academic levels.
4. That a balanced mathematics program emphasizes both rich problem-solving experiences and mental mathematics and computational skills taught in ways which are inclusionary and relevant to the learner.
5. That mathematics activities and tasks are more meaningful when they are cross-curricular, cross-strand and integrated into day-to-day contexts.

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6. That children enter school with intuitive notions of mathematics and partially learned concepts. Teachers build on these notions using developmentally appropriate methods. Early learning of mathematics, which builds on the background experiences learners bring to the classroom, provides the foundation for later success.
7. That the learning of mathematics is enhanced when learners are actively engaged in making sense of mathematics and in building on their own understandings. Students bring to the classroom diverse learning styles and rates of learning which are addressed through effective classroom practice.
8. That the study of mathematics includes the appropriate use of technology. Calculators and computers facilitate creative problem-solving and problem posing, management of data, and investigation of patterns, graphs and relationships.
9. That the primary use of student assessment and evaluation is to improve learning for all students. Assessment has the greatest potential to improve learning when it is an integral part of all classroom activities and when assessment information is used to identify students' strengths and weaknesses to outline the next steps for learning.

The Toronto District School Board values a partnership of learners, teachers, families, and communities. Schools and families must maintain ongoing dialogue to ensure that learners receive the support, reinforcement and the challenge they need to achieve in mathematics.

Teachers of mathematics require ongoing professional development to acquire and maintain the competencies necessary to meet the demands of a subject that continues to grow and change. The Toronto District School Board is responsible for ensuring that teachers have access to opportunities for professional development in mathematics. Teachers should also take an active role in developing and enhancing their own professional expertise.

The Toronto District School Board believes that the development of mathematical knowledge and skills enables learners to think and reason logically, to analyze and interpret data critically and to communicate their thinking precisely and clearly

Note: See also Policy D.02: Achieving Excellence in Reading, Writing and Mathematics