

## Math Moment...

"Young children have the curiosity and the capability to engage in complex mathematical thinking and learning. Children need to experience mathematics concepts in depth through revisiting and repeating investigations over a long period of time (e.g., the idea of "five" can be represented by the numeral "5" [numerality] to indicate the number of items [quantity] or the fifth person in a line [ordinality]). Enabling children to revisit and think about mathematics in multiple contexts allows their current thinking to be demonstrated

and new thinking and learning to be revealed and made visible." (The Kindergarten Program 2016, p. 83)

"[The Ontario Mathematics Curriculum] is based on the belief that students learn mathematics most effectively when they are given opportunities to investigate ideas and concepts through problem solving and are then guided carefully into an understanding of the mathematical principles involved. At the same time, it promotes a balanced program in mathematics. The acquisition of operational skills remains an important focus of the curriculum." (The Ontario Curriculum, Grades 1-8, Mathematics, p.4)



"Today's mathematics curriculum must prepare students for their future roles in society. It must equip them with an understanding of important mathematical ideas; essential mathematical knowledge and skills; skills of reasoning, problem solving, and communication; and, most importantly, the ability and the incentive to continue learning on their own." (The Ontario Curriculum, Grades 11 and 12, Mathematics, p.4)

## **How Parents Can Support**

Encourage your child to play math puzzles and games. This includes anything with a dice and cards (e.g. <u>try these</u> ). It will help them enjoy math, and develop number sense, computational fluency, which is critically important.
Always be encouraging and never tell your child "you are wrong" when they are working on math problems. Instead find the logic in their thinking – there is always some logic to what they say. Prompt for further understanding.
Never associate math with speed. It is not important to work quickly, and we now know that forcing children to work quickly on math is the best way to start math anxiety, especially with girls. Do not use speed drills. Instead use visual activities such as <u>https://mathbeforebed.com/</u> (K-6) and <u>http://wodb.ca/</u> (K-12).
Never share with your child the idea that you were bad at math in school or you dislike it – especially if you are a mother. Researchers found that as soon as mothers shared that idea with their daughters, their daughter's achievement went down.
Encourage number sense. It is having an idea of the size of numbers and being able to separate and combine numbers flexibly. For example, when working out 29 + 56, if you take one from the 56 and make it 30 + 55, it is much easier to work out. <u>Number Talks</u> can help.
Perhaps most important of all – encourage a " <b>growth mindset</b> ". Let your child know that they have unlimited math potential and that being good at math is all about working hard. When children have a growth mindset, they do well with challenges and do better in school overall. When children have a fixed mindset and they encounter difficult work, they often conclude that they are not "a math person". One way in which parents can encourage a growth mindset is using praise such as "it is great that you have learned that" or "I really like your thinking about that". When they tell you something is hard for them, or they have made a mistake, tell them: "That's wonderful, your brain is growing!" <u>Growth Mindset</u>

As a parent, there is a lot you can do to help your child learn and love math. Learn about the math that your child is studying in school. Look for math in everyday activities. Offer encouragement and have a positive attitude toward math. Parents can be a great role model, math mentor and coach.

Produced in partnership with the Ministry of Education and Ontario District School Boards.

