

## **Tips for Math Learning at Home**

“The key to understanding math is making sense of it. Many students believe that math is a set of formulas that have to be remembered – this belief is associated with lower achievement. Math is a very creative subject that is, at its core, about visualizing patterns and creating solution paths that others can see, discuss and critique.”    <http://youcubed.stanford.edu/category/teaching-ideas/number-sense/>

## **Tips for Supporting Your Child at Home**

1. Help your child notice how you use math everyday. (e.g., playing games, cooking and baking, estimating how much your groceries will cost when you get to the till...etc.)
2. Talk to your child’s teacher when you have questions.
3. Be positive - everyone can learn mathematics with perseverance.
4. If your child is working on math homework, encourage her/him to “own the learning” - always try to have the math thinking come from your child.
5. Try not to tell your child how to do the math. They may not understand your thinking. Instead, ask questions that encourage understanding (“Why did you do that?”, “Why does that work?”, “How do you know you are right?”, “Is there another way you could do it?”, “Does your answer make sense?”, “Did you answer the question?”).
6. Encourage your children to ask questions and wonder along with them.
7. Set high expectations - children need to learn to persevere, to adjust thinking and strategies if their first attempt at a solution is unsuccessful. Encourage them to keep trying, if your child gets frustrated, take a break and come back to it.

## **Ontario Ministry of Education Resources**

<http://mathies.ca/games.php> & <http://mathies.ca/learningTools.php>

Mathies.ca is an online resource for students, teachers and parents with many interactive math tools and math games.

<http://www.edu.gov.on.ca/eng/curriculum/elementary/math.html>

Curriculum and resource documents for elementary mathematics.

<http://www.edu.gov.on.ca/eng/curriculum/secondary/math.html>

Curriculum and resource documents for secondary mathematics.

<http://www.edu.gov.on.ca/eng/literacynumeracy/parentGuideNumEn.pdf>

Kindergarten to grade 6 booklet with tips on how to help your child with math.

<https://homeworkhelp.ilc.org/>

Homework Help is a free online math help resource for students in Grades 7-10. Students can register for free accounts by using their Ontario Education Number (OEN) and birth date. Students' OENs can be found on any old report card or by asking their classroom teacher.

Registration: [https://homeworkhelp.ilc.org/tools/media\\_tools/resource.php?r\\_id=14](https://homeworkhelp.ilc.org/tools/media_tools/resource.php?r_id=14)

## **Other Resources on the Internet**

<http://thelearningexchange.ca/projects/leaders-in-educational-thought-mathematics-k-12/>

School Achievement Division video clips from a variety of mathematics education speakers.

<http://www.dreambox.com>

An elementary math web based support for students. It promotes mathematical understanding of number sense concepts and encourages student perseverance.

<https://www.youtube.com/watch?v=UiHttR7WfaQ>

Jo Boaler explains the importance of problem-based learning to support student achievement in mathematics.

<http://vimeo.com/110807219>

A video clip that discusses why math is taught differently than it was in the past and helps address parents' misconceptions about the "new math".

<http://www.peopleforeducation.ca/wp-content/uploads/2012/03/SuccessParentTips.pdf>

A web site to support public education in Ontario schools. Many "tip sheets" for parents available in multiple language.

Jo Boaler – Mindsets and Learning Math:

<https://vimeo.com/103921126>

<http://youcubed.stanford.edu/category/teaching-ideas/growing-mindset/>

"There is a really damaging myth that pervades the US/UK and other countries – the idea that some people are born with a 'math brain' and some are not. This has been resoundingly disproved by research but many students and parents still believe this. It is really important to communicate "growth mindset" messages to students. Help them know that everyone is a math person and that the latest research is telling us that students can reach any levels in math because of the incredible plasticity of the brain."