

## Turn Math into Family Fun - Supporting Growth Mindset, Confidence and Perseverance

*For parents of junior and middle school students*

Math in classrooms today is not about learning and memorizing procedures or finding one solution to an isolated question. Today mathematics is about giving students the opportunity to inquire about and engage with the math, while the teacher guides. In this way, children get a chance to problem solve and think critically about the math; they invent and assess their own procedures and become empowered. Today in math classrooms, students have to predict and prove; they also have the opportunity to judge and evaluate their ideas and the ideas of others in a safe environment. Today, mathematics is meaningful and as a result, students develop a deeper understanding of numbers and their place in our world. In other words, they come to understand that math is everywhere!

**All children can learn and enjoy math. You can help your child succeed in math by:**

- keeping a positive attitude about math
- believing in your child's ability to learn math and grow as a mathematician
- talking about the math in everyday situations (think about all the things you do that involve mathematics)
- asking what they are learning in math class. Encourage your child to use the vocabulary that is being used in class. If you don't understand something, ask them to explain it; having your child communicate their understanding of a concept is one of the best ways to reinforce it and to uncover gaps in understanding.
- Some teachers have websites that they use to post homework assignments and other information.
- Some schools offer an after school programs to offer help in numeracy and literacy.

### **Show your children how math is part of their everyday activities**

- Look at maps, blueprints and discuss them; draw maps (of your kitchen, bedroom)
- Estimate, estimate, estimate (distances, time, the cost of items) - e.g. how long will it take to get to a friend's house, estimate the number of meters from your door to the edge of your yard, how many shoe boxes might fit inside your bedroom, or how many litres of water will fill up a large pot—make it a game!
- Think aloud when performing mental math calculations; notice and share different strategies your family members are using.
- Take family tallies and votes.
- Bake and cook together, discuss the measurements (e.g. how much of each ingredient do we need if we halve or double the recipe?).
- Discuss how math is used in everyday life.
- Go on a math walk (inside your home, in the garden, in the community) and talk about shapes and patterns.

### **Play games to learn more math**

As a family, you can play games to turn math into family fun. Here are a few suggestions:

- During family time, challenge yourselves by working on math problems together. Use the offered websites for ideas; it can be fun!
- Make up games using playing cards and/or dice (e.g. turn over one card from the pile. Double the number. Play double plus one or double minus one.
- Play commercially produced games (e.g. Yahtzee, Set, Battleship, Bingo, puzzles, Sudoku)

### **Homework Time**

Visit "Parents Boost Learning" at [www.peelschools.org](http://www.peelschools.org) for more *Parent Tip Sheets*.

- Homework includes review, practice, self-study and goal setting. Support of your child's ownership of their learning is vital. Regular review of new concepts leads to deeper understandings.
- Help your child develop routine whereby they complete their work at the same time every night. This should be done with no distractions and in a well-lit area. Check in regularly with them to monitor their progress.
- Monitor commitments outside of school. Many students get so involved in other activities that it may be difficult for them to keep up with their schoolwork.
- Organization! Most schools provide students with an agenda. Encourage daily recording of homework assignments and key dates.

### Read fun math books

Linking math with literature often places math in a real world context, and also provides opportunities to see the fun, beauty, and importance of mathematics in our world. The following books should be available at your local public library:

*The Greedy Triangle*

by Marilyn Burns

*Amanda Bean's Amazing Dream*

by Cindy Neuschwander

*A Cloak for the Dreamer*

by Aileen Friedman

*Spaghetti and Meatballs for All*

by Marilyn Burns

*The \$1.00 Word Riddle Book*

by Marilyn Burns

*Math Curse*

by Jon Scieszka and Lane Smith

*How Much Is a Million*

by David Schwartz

*Grandfather Tang's Story*

by Ann Tompert

*Length*

by Henry Pluckrose

*The Village of Round and Square Houses*

by Ann Grifalconi

*Sir Cumference and the First Round Table*

by Cindy Neuschwander and Wayne

Geehan

*Chasing Vermeer*

by Blue Balliett

*Holes*

by Louis Sachar

### Math websites for students and parents

- Online resources that help you support your child's numeracy success are available on the Peel's board's website at [www.peelschools.org/parents/helpyourchild/math](http://www.peelschools.org/parents/helpyourchild/math)
- The elementary and secondary school curriculum is available on the Ministry of Education website [www.edu.gov.on.ca](http://www.edu.gov.on.ca)
- [www.eworkshop.on.ca](http://www.eworkshop.on.ca)
- The *Independent Learning Centre* [www.ilc.org](http://www.ilc.org) offers an *Ask a Teacher* feature, which is a chat room staffed by qualified teachers.
- [www.mathcats.com](http://www.mathcats.com)
- [www.figurethis.org](http://www.figurethis.org)
- [www.nctm.org/resources/families.aspx](http://www.nctm.org/resources/families.aspx)
- [www.mathisfun.com](http://www.mathisfun.com)
- [www.coolmath4kids.com/](http://www.coolmath4kids.com/)
- [www.mathonline.peelschools.org](http://www.mathonline.peelschools.org).
- [www.linktolearning.com/math.htm](http://www.linktolearning.com/math.htm)
- [www.amathsdictionaryforkids.com/](http://www.amathsdictionaryforkids.com/)
- [www.aplusmath.com/](http://www.aplusmath.com/)
- [www.mathplayground.com/](http://www.mathplayground.com/)
- [www.funbrain.com/](http://www.funbrain.com/)
- For information on the grade 6 and 9 provincial math assessment and to review sample questions, visit the EQAO website [www.eqao.com](http://www.eqao.com)
- To learn more about Dr. Dweck's research on student mindset and how to help your child fulfill his/her potential, watch her Ridley lecture here: [bit.ly/RidleyDweck](http://bit.ly/RidleyDweck)

*This tip sheet was originally prepared by Pauline Lindsay, Bibiana Couto and Paul Alves, and it has been modified by Lynn Macaulay and Natasa Pasic-Knezevic.*

*Workshop presented by Natasa Pasic-Knezevic, Instructional Coach K-12, PDSB*

April 18, 2015

Visit "Parents Boost Learning" at [www.peelschools.org](http://www.peelschools.org) for more *Parent Tip Sheets*.