



Hamilton-Wentworth Catholic District School Board Parents Engaging Their Children in Mathematics

“If you want your children to be literate, use a lot of words. If you want them to be numerate, fill their world with numbers.” ~ Rick Ackerly



Sixteen Ways to Bring Numeracy to Life at Home:

1. Help your child develop a **growth mindset** about math.
2. Talk about math and point out ways you use math **everyday**. As much as possible, use math words. Create a learning environment in an easy to access place (e.g. your kitchen table) and hang a whiteboard/chalkboard and calendar there. These can be used when talking about math.
3. Do math out loud. Add, subtract, multiply, divide, estimate...do it out loud so your child can hear your thinking.
4. Count with your child. Count everything: steps, carrots, books on a shelf... Count by 1s, 2s, 5s, 10s. Start at 1 sometimes, other times start at a random number, like 13.
5. Mount an outdoor thermometer outside a window. Show your child how to use it. Have your child do the ‘weather report’ each morning. Make a table with your child and have him/her record the temperature, including units, each day. Compare the temperatures. Talk about greater than and less than.
6. Talk about the position of one item in relation to another item. For example, “The book is **in front** of the game. The plate is **on** the table. The dog is **under** the bed. The coat is **to the right** of the door.”
7. Use the units of measurement when talking about them. Remember, in school we use the metric system so as much as possible talk in mm, cm, m, and km, and g and kg.
8. Talk about the graphs and data that are present in the newspapers and news. Discuss the different ways data can be represented and encourage your child to ask questions to determine what the data means.
9. Play games that involve math with your child. Games that use dice and spinners (e.g., hide and seek, hopscotch, Snakes and Ladders, Sorry, and Trouble) help with counting. Games using playing cards (e.g., Snap and War) help with comparing and ordering numbers, Rummy helps with mental math. Games that use strategy (e.g. Guess Who, Checkers, Labyrinth, Sequence, and Chess) help develop logic. Puzzles, Tangrams, Blokus, Nowhere to Go, Pentomino, Rush Hour, Q-Bitz, and Tetris help develop spatial reasoning. Monopoly and Life help with currency. Battleship helps children get familiar with the coordinate grid system.
10. Make fractions part of your daily life. Use them when cooking, dividing up a cake, comparing who ate the most pizza...
11. When shopping with your child, involve him/her in determining the cost or what deal is the better deal...estimating is a valuable skill to learn.
12. Point out patterns everywhere...in nature, shapes, floor tiles, numbers, cell phone plans...
13. Read stories to them with math themes (refer to the list included).
14. Wonder how far something is or how high it is. Estimate the heights, widths, weights, and volumes of things, then compare with measurements.



15. Talk to your child about the math that they do (e.g. solving a puzzle, dividing up cookies among friends). Some questions you could ask, “What did you do? Why did you do that? How did it help? When could you use it again? Is there another way to do it?”
16. Maintain contact with your child’s teacher and make use of the resources provided by the Hamilton-Wentworth Catholic District School Board.

Growth Mindset and Math

A person with a growth mindset recognizes that intelligence is changeable. New ideas/concepts can be learned through hard work and effort. Challenges, obstacles and mistakes are learning opportunities and important parts of the learning process. Having a growth mindset has been shown to improve student achievement, particularly in math.

Four things you can do at home to foster a growth mindset:

- When praising your child, focus on the effort, perseverance, determination, and ‘stick-to-it-ness’ your child demonstrated when solving a problem, not his/her ability to get it right. For example, try “I saw how hard much you worked at that problem. I could see it was challenging, but you kept trying. That’s wonderful!” as opposed to, “You got the right answer...you’re so smart!”
- Help your child see that a ‘mistake’ is really a learning opportunity. Have your child determine why he/she got the answer he/she did and then encourage them to try again.
- Remember the power of ‘yet’ ...if your child gets discouraged about an idea/concept/problem in math and says “I can’t do it!” add the word “yet” to the sentence. Acknowledge that the idea/concept/problem is challenging, but reinforce the idea that through hard work and effort they will be able to do it. Offer hints or alternative strategies to offset frustration.
- Avoid exposing any negative feelings you have towards math to your child.

Some Online Math Resources

1. Ontario Government:

a) A Parent Guide: Doing Mathematics with Your Child (K to 6):

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

b) The Full-Day Early Learning-Kindergarten Program:

http://www.edu.gov.on.ca/eng/curriculum/elementary/kindergarten_english_june3.pdf

c) The Ontario Curriculum Grade 1–8 Mathematics:

<http://www.edu.gov.on.ca/eng/curriculum/elementary/math18curr.pdf>



2. The Hamilton-Wentworth Catholic District School Board:

a) **Prodigy**: a self-paced math game used to practice math skills for students in Kindergarten to grade 8 → <https://www.prodigygame.com/Play/index.php>

b) **e-math+**: offers curriculum support for grades 3-6 → www.mynelson.com

c) **SuccessMaker** (aka **Home Grown Math Success**): an adaptive online Math program for Grades 1 to 8 aligned to the provincial curriculum: talk with your child’s teacher.

d) **Homework Help**: Homework Help is a free online math help resource for students in Grades 7-10. It provided live one-on-one tutoring from Ontario teachers. →

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

3. **TVO Kids:** offers a number of games on a wide variety of math concepts → <http://www.tvokids.com/search?search=math>
4. **Mathies:** This site is designed for Ontario K-12 students and parents. It has games, learning tools, activities, and additional supports for parents → <http://oame.on.ca/mathies/>
5. **Math CLIPS/ePractice:** Critical Learning Instructional Paths Supports designed to support math concepts from grade 1 to 12 → <http://oame.on.ca/CLIPS>