

Making Student Thinking Visible

Making students' numeracy thinking visible

For parents of students in the primary and junior grades

Student thinking

Student success increases when students can share their thinking. Gone are the days where students simply answer a question and memorize facts. Students practice basic math skills while exploring math challenges. Students are engaged in math problems and activities. Students are expected to think critically. See themselves as problem solvers, and share their thinking. Encourage your student to engage in math activities and share their thinking in a variety of ways.

How can students show their thinking?

Students show thinking using math manipulatives. Students draw pictures, and use numbers and words to explain how they solved a problem or why they think their solution is correct. Students may show thinking by talking, drawing, manipulating or writing.

How can parents encourage student thinking at home?

Make math positive—Share positive stories or comments about math.

Make math meaningful—Spend time discussing math concepts covered in class. Show your child you are interested and excited about their math learning. Just like you spend time snuggling up and reading as your child develops their reading skills, encourage math chats, discuss strategies and look for math in the world around you.

Take time—Be careful not to rush to correct students or give them an answer. Allow students time to work through their thinking. Ask them how they know or why they think their answer is correct.

Count and sort everything—Stairs on the way up to bed, books on a shelf, can you group them? Sort candy, laundry and sort shoes into pairs. Count by 2's, 5's, 10's and 25's. Calculate the taxes on that new pair of shoes your child wants. Find a sale price and calculate how much they will save. Calculate the percent of socks that are white and black in your child's sock drawer.

See math around you—Look at road signs: what is a KM? Look at Flyers, what is a sale? How Much do things cost? Use cash with your child to buy items at the store.

Time for time—Do you have an analog (traditional) and digital clock at home? What time is bedtime? How long does it take to get ready for bed? How long do you brush your teeth for? How long would it be if you double that time? How many days until your birthday?

Play—Play board games and card games at home often. Games teach us about numbers, probability, counting and adding. A family game of cribbage is more fun than flash cards and encourages students to make numbers in a variety of ways.

Problem solve together—Look at word problems: what different strategies can you use? Is there more than one way to solve the problem? Can you add a math picture to show your thinking?

Practice some basic skills and facts—Being familiar and practicing helps to build speed and confidence, use dice to add and multiply or cards to add. Try some traditional flash cards or play multiplication twister. There are many math websites that make learning fun while increasing basic skills.

Music and movies—The internet is full of wonderful resources. Search for songs and rhymes to help your students remember important math information or to deepen understanding. Parents are encouraged to work with their students when online or attach websites to favourites to keep students safe online.

Use math language—Identify and practice the important words for the math units your child is exploring. Practice using these words to explain thinking and talk about math. Your math text book or your child's teacher will be able to help you determine the appropriate words for your grade and subject area. Try using a math word wall or folder with words close by when working on math homework.

When students are stuck—Try to...Draw a picture. Give them a similar problem with easier numbers. Use manipulatives. Act out a problem. Reread or reword the question. Do some research. Play a math game. Ask the student to explain what they already know and what they need to know.

Resources for parents

These resources are available online or in print.

- **Ontario Math Curriculum**
- **Ontario Math Exemplars**
- **Doing Mathematics With Your Child- Parents Guide**

Websites:

Peel District School Board – sections for parents and students and specific section for math help and resources

www.peelschools.org/parents

Math is Fun – Fun Math Games:

www.mathsisfun.com/index.htm

IXL Math-Fun Math Games:

<http://ca.ixl.com/promo?partner=google&campaign=1101&adGroup=Math-Specific+K-8&qclid=CNfjsJL718QCFQmpaQodV2UASQ>

abcya.com-Math Games Primary:

www.abcya.com/

Parallelogram Song –One Example Of How Music Helps Us Learn Math

Concepts:

www.youtube.com/watch?v=EcuzXwtamJc

EQAO Website –sample activities and information:

www.eqao.com/Parents/parents.aspx?Lang=E

eworkshop – parents module:

www.eworkshop.on.ca/edu/core.cfm

*Tip sheet prepared and workshop presented by Deborah Cote, Teacher, Oscar Peterson P.S.
April 18, 2015*

Visit “Parents Boost Learning” at www.peelschools.org for more *Parent Tip Sheets*.