



Pre-School Parent Information

Tips for supporting your child at home:

1. Avoid endorsing math anxiety or being “bad at math”. Students who have these attitudes towards math have more difficulties learning math than those who approach it positively. This is the “growth mindset” versus “fixed mindset” and has been proven to really affect learning. Another way to encourage a Growth Mindset is to encourage perseverance through frustration and understanding that mistakes actually make the brain grow – so are not bad but rather are very useful for developing understanding.
2. Math is literally all around us....if we look for it. It doesn't have to be just computations but rather looking at relationships, patterns and sizes. Problem solving, deciding between choices are also mathematical processes, as are playing games and solving logic puzzles.
3. For younger students: grouping and organizing toys, practicing adding and subtracting using toys, blocks, etc. and looking for and making patterns. Comparing more than and less than and by how much. For example: a child has 4 dolls and 12 stuffed animals, you could ask, “how many more stuffed animals than dolls do you have and how do you know?”
4. Read books that involve math or find the math in nighttime stories. Encourage creativity and ask your child to find the math (shapes, counting, comparing, categorizing, estimating, etc.) in stories, shows, movies etc. This helps develop mathematical habits of mind.
5. Cooking/Baking:
 - i. Just using measuring spoons and cups and reading recipes helps!
 - ii. When doubling or halving recipes, determine how much of each ingredient is needed.
 - iii. Looking at the measurements on measuring spoons and cups, determine how many teaspoons in a tablespoon, how many tablespoons in a $\frac{1}{4}$ cup, etc.
 - iv. Ask them to do the measuring and show when you estimate ($\frac{1}{2}$ teaspoon in your palm etc).
6. In the kitchen:
 - i. What holds more – juice container or milk container? How do you know? How much more?
 - ii. Find containers that have similar volumes but different shapes (like a tall skinny container compared to a short fat container). Ask them to determine by looking which has more, then read the volumes

- iii. Estimate weights of ingredients (a potato, carrots, etc) and then weigh them on a scale to see how close you came.
 - iv. Chop vegetables into fractions! If I chop a celery stalk into 4 pieces, what fraction of the stalk is each piece?
7. In the car: (keep in mind that the working memory is not fully developed so don't overload with large numbers)
 - i. Make 5, or make 7, 10, 20 etc. – they can make 5 by adding, subtracting, multiplying, dividing, or a combination. This can be done with any number and the more ways a child can find the better! For K – make 5, for Gr. 1/2 – make 10, for Gr. 3/4 – Make 20, 25, 30, etc. for Gr. 5- up to make 100
 - ii. Estimate how far 1 km is (use your odometer). Estimate 2 km. Use Siri to get directions and then make a game out of when to turn (she'll say "turn left in 500m"). It helps students to know how far 500 m or 200 m is.
 - iii. Ask your child an addition (subtraction, multiplication, division) question and then ask them HOW they got it. For example: $15 + 7$ (they might say $10 + 5 + 7 = 10 + 12 = 22$).
8. Always ask WHY or HOW so that they are required to explain their thinking.
9. Play games such as:
 - a. Any board game that uses dice and cards
 - b. Dot card and 10 frame games and activities
 - c. Set
 - d. Tangos
 - e. 'Make 10 Go Fish'
 - f. Mastermind
 - g. Dominoes
 - h. Mancala
 - i. Chess/Checkers
 - j. Cribbage
 - k. Yahtzee

USEFUL WEBSITES

www.educatingnow.com – is my own company's site – the blog is free and has more detail about the information I shared with you this evening. It is also how you can contact me with questions.

<https://www.youcubed.org/students/> - great messages for students (and parents) and some good problems, articles, games, etc.

<http://www.mindsetonline.com/howmindsetaffects/parentsteacherscoaches/index.html>

- This is Carol Dweck's work around the Growth mindset – well worth the read!

https://www.ted.com/talks/carol_dweck_the_power_of_believing_that_you_can_improve?language=en

- This is Carol Dweck's TED talk – it's about 10 minutes long and is directly related to how the growth mindset affects mathematics achievement.

<http://www.mec-math.org/math-at-home/>

- A wonderful site filled with useful tips, games, and ways to support your child in math

<https://www.schoolbag.sg/story/preparing-students-for-the-21st-century#.Vp04yugrLIU>

- A quick read that sums up why and how the math curriculum is changing

<http://gregtangmath.com/games>

<http://www.gregtangmath.com/breakapart>

www.nrichmaths.org – has some great problems and activities that promote deeper mathematical thinking and it's free!

Find children's books that have a Math theme here:

<http://www.the-best-childrens-books.org/math-for-kids.html>

http://www.goodreads.com/list/show/14440.Top_Rated_Educational_Math_Books_for_Children

<https://i-9490-directors.wikispaces.com/file/view/Early+Numeracy+Resources.pdf>

<https://nrich.maths.org/10740>



<http://teachmath.openschoolnetwork.ca/grade-1/number-sense/510-frames/>

- 5 and 10 frames you can print and use with beans, buttons, etc.