



5 tips for introducing mathematics at home

Most parents and care givers are comfortable with making links to English and literacy at home. This may be by reading to or with your child, pointing out signs when driving in the car or practicing writing their name. Mathematics activities at home are just as important but may not be as common as those for English. There is even research to suggest that children's early performance in mathematics is a better indicator of success later in life than their reading ability. Here are a few suggestions of ways to make mathematics matter at home.

1. Play games

Games are great fun anyway and children, usually, enjoy the competitive and fun nature of games (unless it's monopoly!) There are some wonderful games that promote and practice some early number sense skills that children need to develop. Card games are probably the easiest to start with and playing card can be picked up at a local '\$2 shop' in most suburbs. Playing snap to match numbers or changing snap to be the number before or after encourages number identification. Yahtzee is a great dice game that promotes both addition and multiplication. Dominoes is another game that develops number sense skills for young children. Catherine Attard has a great couple of posts on her blog about using dominoes <https://engagingmaths.com/2015/03/22/woolworths-and-dominoes-how-parents-can-turn-marketing-ploys-into-mathematical-learning-opportunities/>

2. Cook

I know it can sometimes be more disruptive than helpful to let children make dinner or cook with you, but it has many mathematical benefits. It is one of the first, and more common, uses of mathematics in everyday life. Dealing with quantities and counting out ingredients introduces students to the need for accuracy. At first it may be that you provide the right equipment such as $\frac{1}{2}$ cup and they measure out the flour. Then it can move to making it more problematic where you need $1 \frac{1}{2}$ cups of flour but you only have the $\frac{1}{2}$ cup measure- what do we do?! This helps children to work practically with equivalent fractions, seeing that two $\frac{1}{2}$ cups would give us one cup, so I need to measure 3 lots of the $\frac{1}{2}$ cup.

3. Read books that involve numbers

There are many picture books you can buy now that focus on mathematical concepts and show the fun, creativity and pleasure of working with numbers. These books explore counting items, matching pictures to numbers, making combinations of numbers and solving



mathematical problems. I have listed a few books here but there are many more! A quick Google search for 'picture books for mathematics' will yield more results.

- *One is a snail, ten is a crab* by April Pulley Sayre and Jeff Sayre
- *12 ways to get to 11* by Eve Merriam
- *Let's count to 100!* by Masayuki Sebe
- *None the Number* by Oliver Jeffers
- *Quack and Count* by Keith Baker
- *One Thing featuring Charlie and Lola* by Lauren Child
- *Peg + Cat: The lemonade Problem* by Jennifer Oxley and Billy Aronson

4. Math before Bed

<http://mathbeforebed.com/>

Many homes have bedtime routines like having a bath or reading a book. Well how about mathematics before bed? This great idea was developed by Jonathan Orr who has created a website, book and Facebook page of the same name- Math Before Bed. It was created as a 'Nighttime Numeracy' routine and has taken the world by storm. I use this with my own children and if you don't do it one night, there are groans of "We want math before bed!" which is music to my ears as a mathematics educator! The idea of math before bed is that you show your child an image from the site and ask the prompt question that is on the image. It promotes discussion and pondering to solve the question. The website also provides great advice about how to start nighttime (or anytime!) numeracy routines <http://blog.mathbeforebed.com/2018/01/23/enhance-nightly-discussions-at-home-with-these-3-techniques/>

5. Answer a question with a question

In the day to day busyness that is home-life with children, they ask millions of questions. Many of these questions have to do with mathematics, particularly once they begin formal schooling. Most of the time it is easier to just give them the answer, but the richness of mathematics comes when children solve the problems themselves. When asked "How much change will I get if I buy this toy?" ask "How much do you think?" or "How could you work it out?". When asked "What time are we leaving to go to the party?" say "We need to be at the party at [say] 2 pm, it's 11 am now, what time do you think?" then prompt "What time do you think we need to leave?" and "Why".

These questions promote mathematical thinking. Yes, your child will get sick of you doing this! Mine do! But it's worth it all the same. I particularly like to do it when they are spending



their pocket money and there is a 10 or 20% discount. They want to know how much they are saving so there is an interest in working out the answer. Working out percentages is a harder skill that is generally introduced at school in about year 4, but even talking through how you work it out is purposeful mathematics in action.