



THIRD SPACE
LEARNING

Maths at Home

15 top tips for parents and
carers to have fun with maths



What is this resource and who is it for?

In 2011, Ofsted stated that parental engagement can raise achievement in schools and that children have higher attainment levels and achieve more academically when parents are involved with their education.

This resource contains a KS1 and KS2 handout for you - the teacher - to give to parents, whether at a parents evening or via the pupil. It contains some ideas for how parents can help engage their children with maths at home and also improve their child's outlook on mathematics.

For many teachers, getting pupils to learn more effectively at home and producing learning partnerships between pupils and their parents is as difficult as it is important.

Why is this resource important?

It can be particularly hard for parents to know how to help support their children with maths at home. Often parents complain that they themselves are "bad" at maths or that they "never learnt anything useful in maths at school" and they are willing to say these negative comments in front of their children, which then passes a negative image of maths to their children.

Parents also complain that the mathematics curriculum doesn't teach their children any life skills when in fact many areas directly relate to real life, for instance comparing different mortgage rates when they buy a house later on in life. As a maths teacher, I always made sure I wrote down how each of my lessons was related to everyday life so I always had some good examples up my sleeve and never got caught out!

Parents actually have a perfect opportunity to help develop their children's maths skills in everyday life as they can involve their children frequently in solving real life problems. For instance, children could help decide which car insurance company is providing the best deal or could compare a "buy one get one free" deal with a "buy 3 for 2" deal in the supermarket.

So use this resource to help kick-start mathematical learning for your pupils at home. After all, you can't be everywhere at once!

Is maths really that important at home?

Parents have a great opportunity to develop their children's maths skills at home by involving them in everyday activities. If your children can help you find the best deal for your car insurance or work out which supermarket deal is cheapest, then it's helping them understand maths in real life. It also helps develop their basic maths and problem solving skills, which are really important in the UK primary curriculum.

Don't underestimate yourself, or the power you have as a parent getting involved in your child's learning. Ofsted have specifically stated that parental engagement raises pupil achievement.

So here are some tips and ideas to show how you can improve your child's KS2 maths skills at home.

1 Start with a positive mindset

Do you ever hear yourself saying "I'm really bad at maths" or "I just didn't get maths in school"?

It's difficult to understand just how much children will pick up on any negativity towards particular subjects from their parents. Unfortunately, this can be a real barrier to their learning. We advise parents to try and use positive language around their children such as "don't worry, it's okay to make mistakes, we all do", also be as patient as possible with your them when they're doing their homework.

You may not mean to be negative, but your children may take it to heart. Positivity can go a long way to improving their attitude towards maths!

2 Use maths talk every day

Talking about maths is really important for your child's mathematical development. As your child is at KS1 level, you want to start off with the basics - don't overwhelm them.

Whenever you have the opportunity, try to include maths talk in their lives. This is easily done when they are playing with physical objects as you can reinforce their counting skills. For example, how many pennies are you holding? Or what shape is that object? When counting, reinforce the last number they counted as this can help their mathematical development further, for example "one, two three...three cars." Just like children's TV shows do.

Two easy concepts to develop with your children are doubling/halving and adding/subtracting. Again, you could use physical objects such as food to reinforce this.

It's as simple as asking your child to count the number of chicken nuggets or peas (or any other food!) on their plate at dinner time. and then you can ask them things like:

- "If I doubled the number of chicken nuggets on your plate right now, how many would you have?"
- "If I ate half the peas on your plate for you, how many would you have left?"
- "If we added all of my chicken nuggets to your chicken nuggets, how many would we have altogether?"

Even better if you can turn this into a game to engage your children at mealtimes. You can even reward them with more nuggets!

3 Develop their memory skills

One problem that parents across the UK have started to recognise is that the younger generation now have little need to memorise things such as phone numbers any more. Though this seems small, it can be can be detrimental to our children's memory skills.

Try encouraging your children to memorise your phone number and their grandparents'/best friend's phone number, then test them on the numbers occasionally. This can easily be turned into a game or reward system. This not only helps develop their memory skills but also helps keep them safer when they're away from you.

Once they've mastered phone numbers, encourage them to memorise more things such as nursery rhymes, a quote from a book or TV show they like, or prayers to extend their memory skills.

4 Play maths games together

Games are a great way to bond with your children, but also many games use mathematical and logical skills that your children will need in later life. Even a simple game such as a jigsaw puzzle helps children to develop logical and spatial awareness skills. Furthermore, games like snakes and ladders enable children to count the rolls of the dice, which helps develop their counting skills.

5 Watch out for shapes

When you look around, everything is made out of shapes. So why not encourage your children to learn the names of shapes when you're out and about to entertain them? They could identify car wheels as circles, windows as rectangles and even tiles as hexagons or whatever shape they may be!

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1 Start with a positive mindset

Do you ever hear yourself saying "I'm really bad at maths"? It's only small, but your children can pick up on negativity towards subjects and, unfortunately, this can be a real barrier to their learning. We advise parents to try using positive language around your children when talking about maths. You may not mean to be negative, but your children may take it to heart. Your positivity may well improve their maths attitude!

2 Play maths games together

Many games use mathematical and logical skills that your children will need in later life - plus they're fun! Games like jigsaw puzzles help children to develop logical & spatial awareness skills. Board games with dice develop children's counting skills. Other games that may help develop your child's maths skills are darts, scrabble, and chess. Get playing!

3 Learn their maths methods

You can also support your child's learning by getting to grips with the maths they learn, like the grid method and bar modelling. Sometimes parents try to help by teaching their children methods they learned in school. This can confuse children. Try instead to learn the method that your child uses by asking to see the school's Calculation Policy (usually on the school website), speaking to their teacher, or Googling it. This ensures continuity between school and home learning for your child and genuinely improves their learning!

4 Practise reading the time

As we move into digital, many children are growing up not reading analogue clocks. Make sure your child practises reading analogue clocks in everyday life, as this is part of the maths curriculum. It's as simple as reading the clock you may walk past on the side of a building, otherwise how will they ever be able to read the iconic Big Ben?

5 Use fractions in daily life

Fractions can be simple for you to practise with your child. Simple common fractions can be reinforced at home even if you're not too confident with fractions. Stick to fractions you know such as $\frac{1}{2}$ or $\frac{1}{4}$. See a window split into four coloured panels? Ask your child "what fraction of the window is coloured in blue?" You don't have to use rounded shapes such as cakes and pizzas to practise fractions, just make sure the separate parts of the shape are all the same size.

6 Times tables: Practice Practice Practice!

As everybody knows, it's essential for children to learn their times tables in order to access harder maths questions. This is an easy thing for parents to practise with their children - sneak it in when they're bored! Make car journeys go by faster, or distract them on the bus by asking times tables questions. Challenge them to say their times tables backwards if they get bored of reciting them.

7 Involve them with problem solving

The KS2 maths curriculum requires pupils to be able to problem solve in maths. As parents, you can help your children practice these skills every day. You can ask your child to tell you which is the best deal at the supermarket or how much their pair of trousers are worth when there is a 30% sale on in a clothes store, or which internet provider has the best deal when you need to switch.

8 Use open questions

Sometimes it's just plain hard not to work out the correct answer for your child's homework without simply giving it to them. Unfortunately, just giving children the answer to their homework means don't learn to work the answer out for themselves. This means they'll get stuck without you. Next time your child needs help with their homework, try asking prompting questions such as:

"Why did you write that down?" "How did you get that answer?" "What method did you use?"

This will help your child fully understand the maths methods they're using and reinforce independent learning.

9 Play to their love of technology

There's no substitute for personal support with your child's maths, but when you're busy - or even just for a change - giving children short bursts of online practice can be really helpful.

We're spoiled for choice with maths apps on the market and most really engage children. There's definitely no need to spend lots of money. Many are free or economically priced. If you want to know where to start, two of our favourites are Mr Thorne's Maths and DoodleMaths. But there are plenty more!

10 If they need a challenge...

Maths can be very boring for children when they're just repeatedly practising what they already know. If you find that your child needs to challenge themselves more, or gets bored easily. Explore websites such as NRICH (<http://rich.maths.org/>) or Transum (<http://www.transum.org/>).