

# FAMILY MATHS

THE LILYCROFT & ST EDMUND'S  
NURSERY SCHOOLS' FEDERATION



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## MATHS IS FOR EVERYONE

### **Maths is part of everyday life!**

Early maths skills develop at home and anywhere that young children and adults have opportunities to talk, work, play and learn together.

Maths knowledge is useful for all of us – from babies to grandparents, in all aspects of our lives. There's maths in all the every day activities you already do together with your child. Maths is measuring, sorting, building, noticing patterns, making comparisons, solving problems and describing the environment, as well as counting and knowing the names of shapes. There are so many ways to incorporate maths learning into everyday moments.



### **Maths is about talking!**

Maths is everywhere and that's great news for families, because we can talk with our children about maths in fun, natural ways. Include **maths talk** when getting dressed, cooking, playing at the park, shopping, walking down the street, at bathtime and at bedtime. Use mathematical words to describe what you do and see; long, stripy, tiny, under, high, slow, more, again!



### **Maths is fun!**

It is important to have a positive attitude toward maths: Find maths activities that YOU enjoy and feel confident doing; playing a game and keeping score, building a den, making a model, baking a cake, doing a jigsaw, singing a song!

It's good to point out that you are doing maths – this helps children understand that maths is part of everyday life and is important, useful and fun.



### **Maths is not about getting it right!**

It's okay to make mistakes. Mistakes help us learn! Focus on finding out and thinking; trying out different ways to solve a problem. It's not about getting the right answer straight away but having a go, trying again and working things out together.



# MATHS IS MORE THAN COUNTING

When your child counts for the first time, this is of course a significant moment to be proud of! However, it is important to point out that maths involves much more than remembering numbers in the correct order.

Confidence in early maths is mastered through play, talk, real experiences, making mistakes, songs and rhymes, problem solving and having fun!

Early Maths is split into four main areas, all of equal importance:

**Spatial Awareness**

**Number**

**Shape & Measures**

**Pattern**

These areas do not need to be taught, experienced and learnt separately, just as Maths learning will not happen separately to other learning. All areas of your child's learning and development will be linked and the best way for you to support them is by spending time with them, playing and talking.



## Dinner Time

When setting the table, count to see how many items are needed and describe where they go.

How many plates do we need for everyone who is eating?

Can you put a fork on one side of the plate and a spoon on the other?

Can you put a napkin under the fork?

Where should the glasses go?

Can you find out what everyone wants to drink?

Let's count how many people want milk and how many people want water.

# Spatial Awareness

Is developed by using your body in different ways and experiencing and seeing things from different perspectives. Children need to climb, run, jump and hide which is great fun to do outside in the garden or the park. If you join in, follow your child's lead and use words to describe what you are doing together, this will really support their mathematical learning as well as being lots of fun! Playing hide and seek or making a simple obstacle course or a den are all perfect.

**"We are climbing so high, right to the top! I can see for miles from up here.**

**The cars look tiny, I wonder why?"**

Filling and emptying are also key experiences that all children need to develop their spatial awareness. Use boxes, bowls, buckets and tins of different sizes and things like pebbles, pine cones, lids, small toys and socks - to put in and tip out. Water play in the bath is also a brilliant mathematical experience!

**"The box is almost full. How will we fit the rest in?"**

Building towers, making models and doing jigsaws together are perfect for developing spatial awareness even further. Follow your child's lead but encourage them to try out different ways of doing things. Teach strategies such as finding all the edge pieces and always comment on what you are doing together.

**"I can see you have found a corner piece. Where do you think it goes?"**

**"I wonder if we could try building another way?"**

Try to use as much language about position and direction as possible. Plan simple journeys and make maps together. How about a treasure hunt in the house or garden? You could use a map with 'X marks the spot' or use spoken instructions.

**"Walk forwards 3 steps. Turn to the left to face the tall trees. You will find the treasure under the bench, next to the wall."**



## Shape & Measures

Learning about shape, size, weight, distance and speed needs to be done practically through playing and exploring and also through real life experiences. Play and learn with your child, encouraging them to build, make, move, match, arrange and compare using a range of everyday items as well as toys such as blocks and jigsaws. Boxes, fabric, cups, tubes and natural objects such as pebbles, sticks and leaves can all be used to explore features, similarities and differences. Talk about what you are using or playing with using mathematical words such as **tiny, pointy, wiggly, empty, square, curved, heavier, long, highest, cylinder**. Don't worry if you don't know all the specific shape names, find out together what a shape is called or use words that you do know to describe it **"It's like a square but with curves instead of corners"**. Shapes need to be taken apart and put back together in different ways i.e. cutting a square sandwich into 4 triangles then putting them back together on the plate in a square or like a row of mountains.

There are lots of meaningful ways to learn about shape and measures that are part of our everyday lives and perfect to do together.

Weighing out the ingredients to bake a cake or biscuits.

Putting away the shopping: **"Will this box of cereal fit or is it too tall?"**

Tidying up: **"Please put all the small cars in this box and the big ones on the shelf"**

Washing - Sorting out the socks into pairs, matching size, colour and pattern

**"How do you know which socks are Dad's?"**

Children love to find out who or what is the biggest, fastest, heaviest or tallest.

Encourage them to share their ideas and predictions and then find out together.

**"Who is the tallest in our family? How can we find out?"**

**"Which is the biggest piece of fruit in the bowl? Who gets to eat it and why?"**

**"Do you think it will be faster to go to the shop by car or by bike?"**



# Pattern

Our world is full of patterns and to understand pattern is to become aware of the regularity and predictability of things. This is of course, an important mathematical skill. Pattern confidence is a good predictor of future success in maths and in life! Children love repetition and it is important to spend time doing things again and again and again!

**Noticing** - become '**pattern spotters**' finding patterns in your home, on your clothes, in nature and in man made environments. Point out and describe these patterns to your child and encourage them to do the same:

**"Look at this wall - there are lots and lots of bricks in straight rows"**

Think about the patterns in daily routines - mealtimes, bedtime, bathtime.

**"First you put on your pyjamas, then you brush your teeth. After that you have a story and finally you turn off the light and go to sleep."** Encourage your child to think about what comes next and remind them that we often do things in the same order.



**Predicting** and anticipating what is coming next is fun and children love joining in with songs, stories and rhymes with predictable patterns. Leave gaps for your child to fill in and they will soon start to remember more and more, especially if the words rhyme!

**Making Patterns** can be done in so many ways. Body patterns such as '**tap, clap, tap, clap**' are great in a game of copy cat and can become more advanced as your child gets older. Try including sounds and movements too and don't forget to let your child have a go at leading so that you can copy them. You can make patterns with so many things - try natural objects such as leaves and stones, cutlery, blocks, socks, toy cars, pens and pencils - you just need to have quite a few of whatever you choose so that the pattern can repeat again and again and again! As your child gains experience, they may be able to represent their pattern in a different way - '**red, red, blue, red, red, blue**' becomes '**jump, jump, clap, jump, jump clap**'.



## Number

In order to 'master' number or to fully understand that a number tells us how many there are, children need to experience amounts, more, less and the same - practically. Very early on, children will start to use the word more and understand what it means, as they are given more milk or another piece of banana. During everyday routines such as mealtimes or whilst out at the shops or at the park, you can begin to show and explain to your child what small numbers of objects look like. Describe what you see rather than asking too many questions or always expecting your child to count "**I have 2 oranges**" "**Oh look, there are 3 ducks swimming on the pond today**". Children can naturally recognise small numbers of objects (1-3) without counting them individually - **subitising**. Encourage your child to say what they see, without counting as this is often an easier and a more efficient method.

Songs and rhymes are a good way to help children understand number in another way '1,2,3,4,5 Once I Caught a Fish Alive' and 'Two Little Dicky Birds' are good examples. Songs like '5 Little Ducks' are OK but the maths is a lot more difficult as you are taking away - so ideally, leave these until later. Show your child how to use their fingers to represent how many there are - **finger numbers**. Children need lots of practise putting fingers up and down as they will need to use this method a lot to aid their mathematical thinking. There are many adults who still use their fingers to help work things out! Your child will begin to recognise numbers of personal significance such as your house number, or the number of the bus you catch regularly and of course the number that represents their age.

Counting small numbers of objects for a purpose gives numbers and counting meaning "**We have 4 people and everyone needs a plate - please bring 4 plates to the table**" Support your child to touch each object and to say 1 number for each item. When counting objects with children, adults should also emphasise that the last number said is the amount that we have counted so far '**1,2,3 - there are three cups**'.

