

## EYFS Maths

How to support your child's mathematical development at home.

In children's first years, parents can really have a big effect on their mathematical enthusiasm and attainment. Not by 'teaching them maths' – arguably this will put them off or confuse them! But by recognising all those day-to-day situations in which mathematical ideas arise or mathematical skills can be practised.

### Our Mathematics Curriculum in the Early Years

<b>Number</b>	<b>Shape, space and measure</b>
Counting	Patterns
Ordering	Shape
Number recognition	Size
Addition	Position
Subtraction	Time
Doubling	Money
Halving	
Sharing	

### Early Learning Goals

#### **Number**

By the end of Reception children should be able to...

...count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

#### **Shape, space & measures**

By the end of Reception children should be able to...

...use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

## Everyday maths at home

We all use maths a lot more than we realise. A good understanding of everyday maths will help your child:

- solve problems
- make decisions
- understand information

And help them feel confident with day-to-day activities such as:

- telling the time
- shopping and using money
- cooking
- estimating

### **Counting ideas at home**

When children first begin to count, they learn important mathematical ideas:

1. One-to-one correspondence (one number for one object).
2. Stable order (we count 1,2,3,4... not 1,2,7,5...).
3. Cardinality (the last number counted tells how many).

The more you count together the better!

- Have your child count anything they are interested in counting e.g. items of clothes as they come out of the washing machine, toys, kitchen utensils, collections e.g. stickers, rocks, cars, how many lampposts are on our street? How many houses have a red door?
- Count as you walk up and down stairs.
- Mix it up! Have your child count a set of objects but start at different places e.g. the middle of the set rather than the beginning so they understand that the total is always the same.
- Sing counting songs and use counting in meaningful ways in games such as hide and seek.
- Don't just count up, count down too! Sing songs that allow children opportunities to count forwards and backwards.
- Have your child skip count (counting in 2s, 5s or 10s) to count larger groups of items quickly e.g. pasta pieces, buttons, toothpicks.
- Play games that use counting - Hopscotch, Hide and Seek, What's the Time Mr. Wolf, Skipping, Hula Hooping.

**Top Tip – When children learn to count, they like to touch, point to and move objects as they say the number aloud – provide loads of opportunities for this and encourage them to do so.**

### **Matching quantity to numeral**

As children count, they learn to connect quantities (such as five buttons) with their number names (such as the word five) and symbols (such as 5).

- Play a number version of I Spy. For example, "I spy something that has the number five on it," or "I spy something in this room that there are three of."
- Develop your child's awareness of the symbols that represent numbers by making it a game e.g. look for number symbols in your home and when out and about.
- Encourage children to record 'how many?' by using a combination of numbers and pictures.
- Point out numbers wherever you see them. They can be spotted on buses and houses, in the pages of books, on birthday cards, as scores in a game and many more places! Remember to talk about what the numbers mean.

### **Problem solving**

Try and involve your child in using numbers to solve problems and make everyday decisions.

- “We need six tomatoes to make our sauce for dinner, and we have only two. How many more do we need to buy?”
- “How many sweets do you have altogether?”
- “Two guests are coming for dinner. How many plates will we need? How many utensils?”

Top tip - Encourage your child to talk about and show a maths problem in a way that makes sense to her or him – for example, your child may act it out, use the actual materials, draw it or count on his or her fingers!

### **Pattern and Shape**

- When talking with your child, identify things by their shape and size: “Please pass me the largest box out of the cupboard, the square-shaped cracker and the circular plate.”
- Ask your child to look for 2D shapes on objects at home or outside. For example, find and name the shapes of street signs.
- Go on a shape hunt – how many circles, squares, rectangles, triangles can your child find? Are they 2D or 3D? You can look for patterns too.
- Look for 3D shapes: cubes, cones, spheres, pyramids and cylinders. Talk about how a can or a paper towel roll is like a cylinder.
- Play I Spy. “I spy something that is round,” “I spy something shaped like a cylinder.” Make it more challenging using two shapes: “I spy something that is round and has a square on it.”
- Get dancing - create patterns by making up short dances, or rhythms using your body (e.g. clap, clap, stomp, tap knees, and repeat).

### **Maths and Money**

- Play the coin game. Together, trace around coins and colour in the shapes. Ask your child to match the coin to the image and discuss the names of the coins.
- At the shops - ask them to guess how much a couple of items will cost. Give them small amounts e.g. 20p, - what can they buy? Talk about the items you buy - which are more expensive, which are cheaper? Which are heavier, which are lighter? Let them pay for some things at the till!
- Play shops – use pretend money such as Monopoly money for your play shop and use items from all over the house. By 'buying' things with play money, your child begins to understand that different things need different amounts of money.

### **Time**

- What day is it yesterday, today, tomorrow?
- Use timers, phones and clocks to measure short periods of time.
- Count down 10/ 20 seconds to get to the table/ into bed etc.
- Recognising numbers on the clock. If you cover a number, what number was missing?
- Talk about time - for example, how long does it take to walk to the shop, or to school?

### **Maths and games**

- Board games – Snakes and ladders, Ludo.
- Card Games – Snap, memory pairs, Uno, sorting real cards.
- Other games – Connect 4, Jenga, Honeybee, dominos.
- Jigsaw puzzles.
- Construction – Lego, K-nex, meccano, sticklebricks.
- Play sport! Sports are the perfect chance to talk about speed, scores, time and angles. Get competitive - how many goals/points can your child score? How many can you score?

## Get cooking!

Cooking is a fun and enjoyable way to incorporate maths into everyday life. Cooking activities will allow opportunities to:

- Count e.g. how many spoonful's do we need?
- Recognise numerals e.g. when reading a recipe together.
- Understand more/less e.g. how many more tomatoes do we need?
- Understand capacity e.g. add half a cup of water.
- Understand weight and use scales for measuring e.g. add 10g of butter.

Playdough is a fantastic resource for maths. It can be used to support children's understanding of both shapes and number.

Here's a simple recipe you can make together:

1 cup of plain flour

1 cup of water

1 tablespoon cooking oil

2 teaspoons cream of tartar

½ cup of salt

food colouring and essences (optional)

Put all ingredients in a large saucepan, and heat slowly, stirring all the time until it forms a ball. Keep it wrapped in clingfilm or in a covered tub to stop it drying out.



## Songs and rhyme

- Children often first learn about numbers and counting through rhyme – they learn the pattern of words before they understand the meaning of the words and concepts.
- Songs and rhyme are an important way for all children to learn about number order, forwards and backwards, counting and calculating.
- Using actions, fingers or objects when singing will help children develop skills even further, for example they could also learn to match quantity to numeral and have opportunities for counting rather than just reciting in order. For example:
  - 1,2,3,4,5 – number names, counting/ordering forwards to 10.
  - 10 in the bed – counting backwards from 10.
  - 5 little ducks – subtraction.

## Useful Websites

- Mathletics
- Education City
- You Tube for number stories, rhymes and songs
- Cbeebies for grown ups <http://www.bbc.co.uk/cbeebies/grownups/help-your-child-with-maths>
- Sesame Street maths <http://www.sesamestreet.org/parents/topicsandactivities/topics/math>
- Nrich <http://nrich.maths.org/early-years>
- <https://www.topmarks.co.uk/>

# Golden Rules

Build strong, positive attitudes about maths. Before children can learn maths, they need to believe in their ability to do so. You can be your child's first role model for learning. If you engage with your child in a supportive, relaxed atmosphere, your child will enjoy exploring the world of mathematics.

**Don't** say things like 'I can't do maths' or 'I hated maths at school'... your child might start to think like that themselves...

**Don't** push a skill, such as counting, if a child is tired or bored. They may come to feel 'pressured' and have a natural reaction against it.

**Don't** worry about your child doing written sums! Children will learn to write their numbers and record their maths at school, where teachers will ensure that they do these things correctly. At home it is the mental maths that counts!

**Don't** time them! Speed doesn't matter at this stage. Children can often get disheartened if they are unable to find the answer or solve a problem in a given time.

**Do** 'little and often'! Counting on the stairs or doing up buttons is a relaxed way of reinforcing and practising this skill.

**Do** give LOTS of praise. Resist the temptation to say, 'but' or to point out mistakes every time. Children need encouragement and positive reinforcement to be confident. Remember that a confident child makes a better learner.

**Do** play games! Jigsaws and games of all sorts make excellent excuses for helping your child do maths whilst sharing something important together and having fun. Dominoes, dice or card games, and other commercial games are all great!

**Do** remember that your focussed attention is a far more important and pleasurable commodity for any child than any amount of TV or video game activity. Every child wants to be doing things one-on-one with someone they love and trust.

**Do** talk about the maths in everyday life and ask your child how they work out problems or questions.

**Do** let your child enjoy talking about what they've learned and praise them when they try hard.

**Do** try out the National Numeracy Challenge yourself – the more confident you feel, the more you'll be able to help your child.