



## Teaching for Mastery in EYFS

### A Mathematics Guide for Parents

In EYFS at LMPs, we follow the Early Years Foundation Stage (EYFS) Framework. Maths in the Early Years has two parts: 'Number' and 'Shape, Space and Measure.' By the end of Reception, your child should be able to do the following

#### Early Learning Goals in Reception

Number	Count reliably with numbers from 1 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 and Measure	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

#### Definitions of key language

- ◇ **Development Matters in the Early Years Foundation Stage** - this is the document we use when planning lessons and activities in Reception. The 'Mathematics' area of learning is divided into two sections: 'Number' and 'Shape, Space and Measure'.
- ◇ **1:1 correspondence** - this means counting objects and saying one number name for each object as it is counted. To support children with 1:1 correspondence, we suggest they touch/move each object as it is counted, or place the objects in a line.
- ◇ **Conservation of number** - this means that the quantity of objects stays the same, even if the appearance is altered, e.g. whether objects are arranged in a pile, line or circle, the quantity remains the same and therefore objects do not need to be recounted.
- ◇ **Cardinal numbers** - cardinal numbers tell you how many objects are in a set. When counting, we support children to recognise that the last number they say shows the total amount within a group.
- ◇ **Ordinal numbers** - ordinal numbers tell you the order of something in a list, e.g. 1st, 2nd, 3rd.

#### Key vocabulary for children

Numbers and Counting	Measuring	Data Handling	Shape
Number names (one, two, three, etc.) First, second, third (ordinal numbers) How many? How many altogether? Count up to... Count on... Count back... More/less Odd/even Estimate More/fewer/less Compare Before/after/next Ones/tens/teens	Measure Length- short/shorter/shortest, long/longer/longest Capacity- Full/empty, container Weight- heavy/heavier/heaviest, light/lighter/lightest, balances/scales Distance- near/nearest/far Time- o'clock, big/little hand Order Position- above, below, next to, on top of, behind, in front of, in between.	Count Sort Set Group Match Same/different Most/least More/fewer  <b>Calculation</b> Add/plus Take away/subtract Sum/total/altogether Double/halve/share One more/two more/ten more One less/two less/ten less Count on/back + - =	2D shape names: circle, square, triangle, rectangle, hexagon, octagon, pentagon 3D shape names: cube, cuboid, pyramid, square-based pyramid, cone, cylinder, sphere Side Corner Edge Face Curved Round Flat Solid

## How do we teach for Mastery in Early Years?

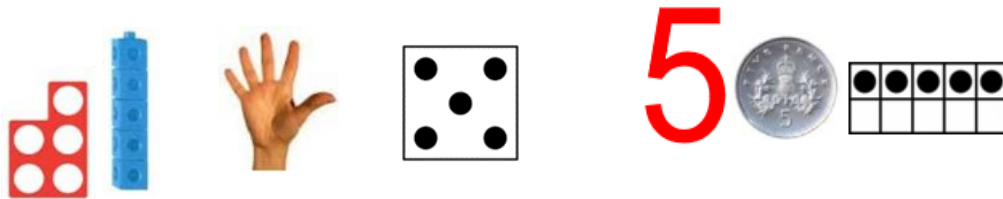
### Fluency

In Reception and Nursery, we aim to teach so that children have a deep understanding of number.

#### ◇ Representing Numbers

We want to develop children's number sense so that they understand the number rather than just recognising the numeral. Children need to understand that numbers can be represented in many ways, not just as a written numeral. We use many different objects and pictures to show that numbers can be represented in lots of ways.

*Some ways to represent five*



Children sometimes need lots of practise to recognise numbers in different forms. We play matching games and encourage children to recognise and make different amounts in our indoor and outdoor areas.

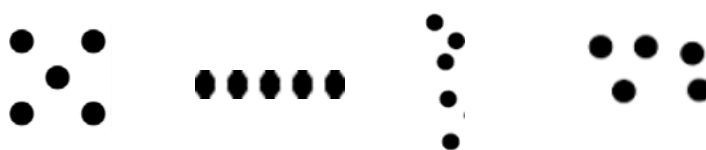
### Counting

When counting, children need to understand ...

- ◇ That we need to say one number for each object counted.
- ◇ The final number we say is how many altogether.
- ◇ That we can count objects in any order and the total stays the same.

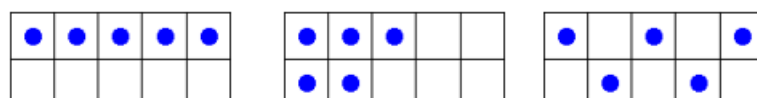
### Recognising amounts

Another skill that is very important is recognising amounts without the need to count them. Initially this should be by using concrete objects: such as the dots below, allowing them to see groups of dots in different arrangements helps them to mentally 'see' how many objects are there without needing to count. This is a very important skill when children begin to add and subtract. Using dice is a good way to practise this skill before moving onto objects in different arrangements.



### Understanding that the total stays the same when objects are moved.

When children first start to use numbers, they often do not understand that if we move objects into another arrangement the total stays the same. We practise this with many different types of objects but a useful tool is using a tens frame to be able to move counters around.



By learning a particular number over a period of time allows children to get a greater understanding of that number.

- ◇ Number: Counting, Ordering, Number recognition, Addition, Subtraction, Doubling, Halving and Sharing, one more, one less, its position on the number line.
- ◇ Shape, Space & Measure: Patterns, Shape, Size, Position, Time (which day of the week/month of the year does that number represent) o'clock and half past, Money, Weight, Capacity.

## Ways to support your children at home

As well as maths learning at school, it is essential that your child is given opportunities to experience maths in everyday life. Please see below some ideas to support your child at home

- ◇ Count - steps up the stairs, money into a money box etc
- ◇ Ask children to say how many without counting (5 or fewer)
- ◇ Play games using dice/dominoes and encourage child to say how many spots without counting.
- ◇ Think of their own representations for numbers eg one of them, two hands, three bears, four wheels on a car, five toes, six sides on a dice, seven dwarves, eight legs on an octopus etc
- ◇ Watch Numberblocks on Cbeebies. This programme is written by maths specialists to model maths concepts and represents number brilliantly. Hide numbers around the house or garden for children to find.
- ◇ Play outdoor maths games like hopscotch and skittles. Even better, let children make up their own games and decide how to score points.
- ◇ Read books with maths concepts eg The Very Hungry Caterpillar, One is a snail, ten is a crab, What's the time, Mr Wolf? The doorbell rang.
- ◇ Shopping: Getting your child to count items as they are added to a shopping basket, noticing numbers on price tags, using money to pay
- ◇ Cooking: Weighing out ingredients, cutting up toast into different shapes, using cookie cutters of different shapes
- ◇ Telling the Time: Discuss past/present/future, how long until...?, can you tell me when it is...?
- ◇ Walking/ Travelling to School: Looking at shapes in the environment, noticing the numbers on the front doors of houses- do they count forwards or backwards? Are the numbers odd or even?, estimating the number of yellow cars, etc. you will see on a journey

The most important thing is for your child to experience a positive attitude to maths - it is OK not to know the answer straight away or be right first time. Maths is a learning journey and regular practise and experience of maths will help your child when learning in the classroom.

## Useful websites and links

### Websites

- ◇ <https://www.topmarks.co.uk/> - in the 'Browse by subject and age group' section, select 'Maths' and 'Early Years' to find age-appropriate activities.
- ◇ <https://www.crickweb.co.uk/> - Select the 'Early Years' tab for age-appropriate activities.
- ◇ <https://www.bbc.co.uk/cbeebies/shows/numberblocks/>
- ◇ <http://www.poissonrouge.com/>
- ◇ <http://www.ictgames.com/>
- ◇ <http://nrich.maths.org/early-years>
- ◇ <http://www.crickweb.co.uk/Early-Years.html>

### YouTube

- ◇ Search 'counting songs', 'shape songs', etc.

### Apps (Search 'counting', 'shape games', 'number practise', etc.)

- ◇ 'Maths, age 3-5' - free
- ◇ 'Pairs-Number Images' - £0.99
- ◇ 'I learn writing numbers lite' - free
- ◇ 'Number Formation - UK' - free
- ◇ 'Writing Magic Numbers' - £1.99