Mathematics at Meadow Lane Infant School

A Guide for Parents and Carers

The aim of this leaflet is to give an overview of some of the ways that maths is taught here at Meadow Lane Infant School and give you some ideas about how you can support your child's mathematical development at home.

Our School Aims for Maths

We believe that each child should be able to think and solve problems mathematically by using the appropriate skills, concepts and knowledge. They should be provided with rich and enjoyable experiences related both to their individual needs and to the wider requirements of society.

In particular we aim for every child to:

- Develop key mathematical skills through a range of teaching experiences.
- To use a range of thinking skills in order to apply their mathematics skills confidently and accurately to solve problems.
- Develop confidence and an enjoyment of mathematics through allowing every child to succeed and develop a positive attitude,
- Experience mathematics in a variety of ways including practical activities, investigations, ICT and some written activities.

Maths in the Foundation Stage

In the Foundation Stage maths is divided into three main areas: Numbers as Labels for Counting, Calculation and Shape, Space and Measure. Children are taught maths in an investigative, creative way that makes links with other areas of learning. They learn through directly taught lessons and activities as well as through opportunities that arise through independent play. This could involve singing songs, imaginative play, games, computer programs and stories. Children are continually provided with opportunities to use their maths skills to solve problems.

Maths in Key Stage One

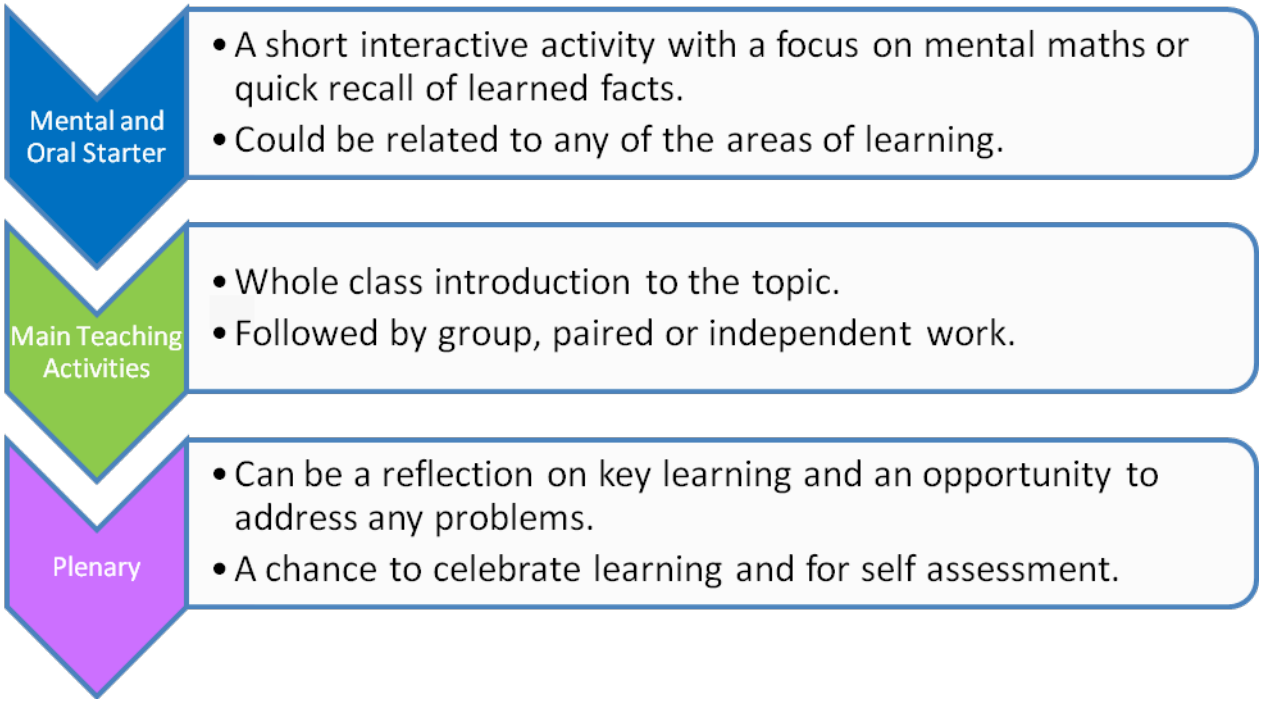
In Key Stage One we continue to teach maths in a practical, creative and investigative way, making links, where possible with other subject areas. The mathematics curriculum is divided into five main areas: Number, Calculation, Shape, Space and Measure, Data Handling and Problem Solving. As children progress through Key Stage One written methods are increasingly taught alongside practical maths. Children are also encouraged to use mental strategies.

Maths Lessons

Children learn maths everyday in a variety of ways. They may be given opportunities to work independently, co-operate in small groups or as a whole class.

Maths lessons are planned so that every child is able to succeed regardless of their previous experiences or abilities. Children who are finding a concept difficult may have learning presented in a different way or have more support to solve a problem. Children who have mastered are given activities to extend their learning. This may be through problem solving, or looking at a problem in a different way, not necessarily through bigger numbers.

A typical maths lesson is structured as follows:



Supporting your child at home

Listed below are some useful activities which will help develop your child's maths skills.

- Let your child help with cooking at home. Help them to measure ingredients accurately using weighing scales or measuring jugs. Talk about what the divisions on the scale stand for. This can also be a good opportunity for multiplication and division problems. E.g. I want to put two smarties on each cake. How many smarties do I need altogether?
- Count forward and backwards from different numbers. Count in ones but also twos, fives and tens.
- Look for numbers around you and read them together. Look at door numbers and ask your child to predict what comes next in the sequence.
- Give your child lots of opportunities to play with money, such as counting and sorting. When you go shopping ask them to find the price of different items. Can they find the right money to pay for it?
- Play lots of games that involve counting, such as snakes and ladders, dice games and games that involve collecting things.
- Make lots of opportunities for your child to count different items such as pasta, sweets or buttons. Encourage them to touch or move the items as they count them. Ask them to group them in twos to count them. You could use the same items to play sorting and sharing games.
- Play bingo. Each players chooses five answers (e.g. numbers to 10 to practise simple addition, multiples of 5 to practise the 5 times table). Ask a question and if a player has the answer they can cross it off. The winner is the first player to cross off all their answers.

One of the most useful things you can do is practise maths facts:

- Pairs of numbers that make 5, then 10, then 20.
- Doubles of numbers to 10 and corresponding halves.

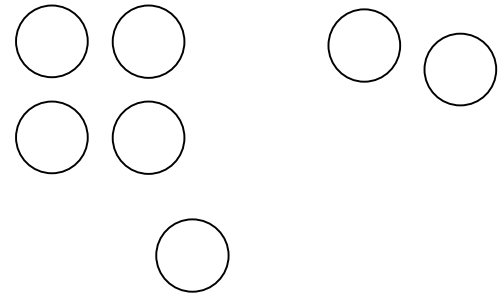
These are just a few ideas to give you a starting point. Try to involve your child in as many problem solving activities as possible. The more 'real' a problem is, the more motivated they will be when trying to solve it.

The following pages show key stages in the teaching of calculation. A more comprehensive version of this is available as a calculations policy.

Methods for Addition

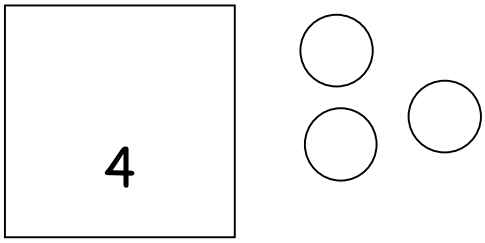
We begin with activities that develop children's counting skills such as counting out loud, counting songs and recognising small quantities.

Then children are taught to add by combining two groups.



4 + 3 = 7

Then cover one group of objects and replace with the number to show that you don't need to start from one every time.

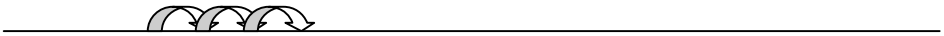


4 + 3 = 7

After that we move onto putting the biggest number in our head and counting on with our fingers.

We then begin to look at using a number line to support addition. First counting in ones and later in tens and ones.

4 + 3 = 7 Start at 4 and count on 3



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

We look at using a hundred square to add and take 1s and 10s and eventually two digit numbers.

34 + 3 = 37

42 + 10 = 52

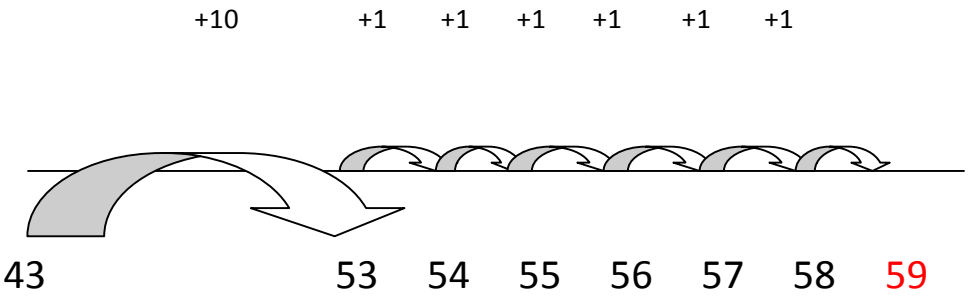
76 – 3 = 73

59 - 10 = 49

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

Then we use a blank number line to count in tens and units.

43 + 16 = 59



This also works for hundreds numbers.

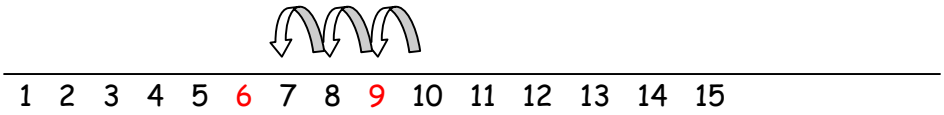
Methods for Subtraction

We begin with activities that support children's skills in counting backwards such as counting backwards out loud in 1s, 10s and 2s, singing nursery rhymes which develop counting on and back.

We then look at taking away real objects from a group and counting those left. Then we move on to putting the first number in our head and counting backwards.

Next the children are taught counting back in single digits using a number line.

E.g. 9 – 3 = 6 Start at 9 and count back 3



We then use a hundred square to count back in 1s or 10s.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

37 - 3 = 34

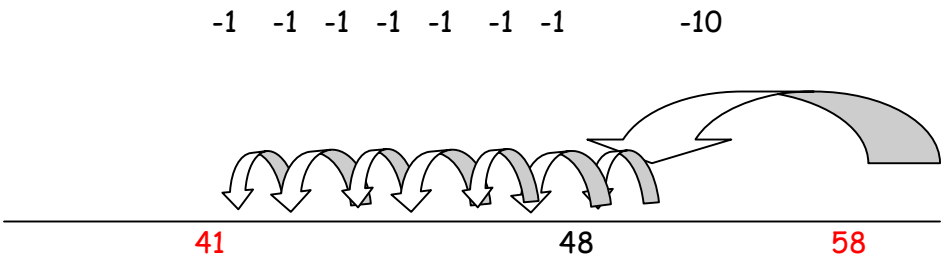
76 - 3 = 73

52 - 10 = 42

59 - 10 = 49

Finally we look at using a blank number line to count back in tens, units and eventually hundreds.

53 – 17 = 41

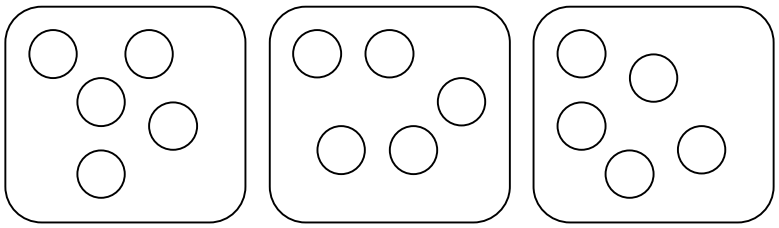


Methods for Multiplication

We begin by counting in 2s, 5s and 10s. Eventually children will recognise multiples of these numbers.

Children are taught to solve multiplication problems by grouping numbers.

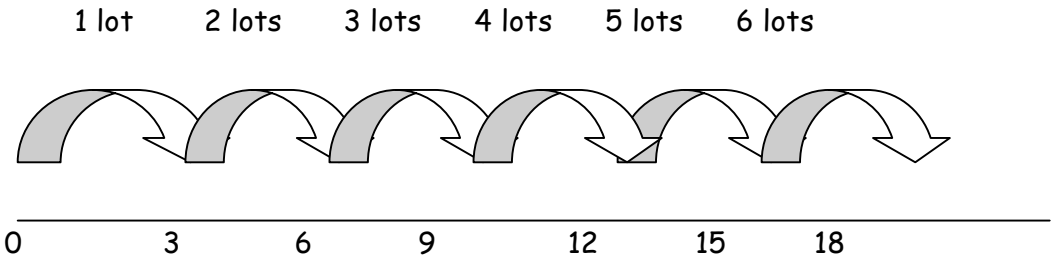
3 x 5 = 15



5 + 5 + 5 = 15

Next the children begin to multiply by counting on. For example, to work out 6x3 the children will count on in threes 6 times. This can be supported by a number line.

6 x 3 = 18

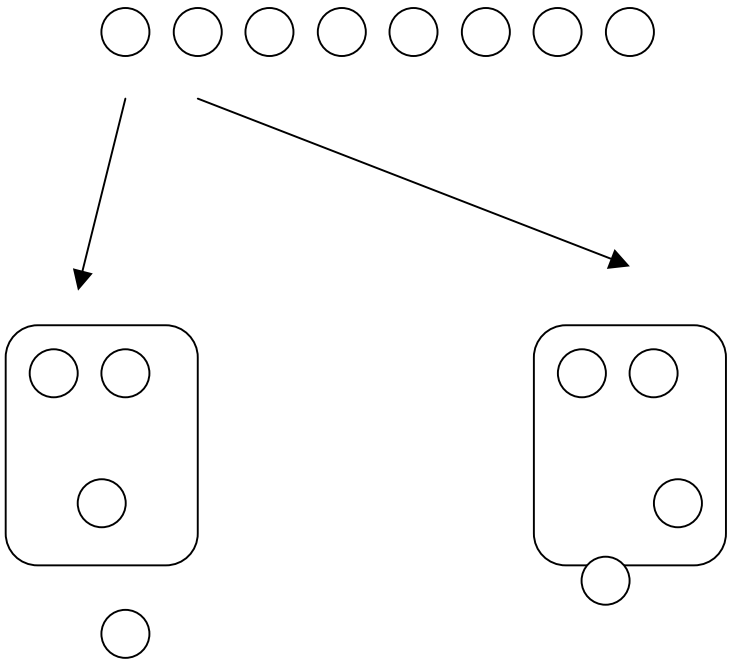


Methods for Division

We begin by sharing repeated subtraction stories, which demonstrate with real objects.

We also look at sharing objects equally into groups

E.g. One for me, one for you, one for me, one for you etc



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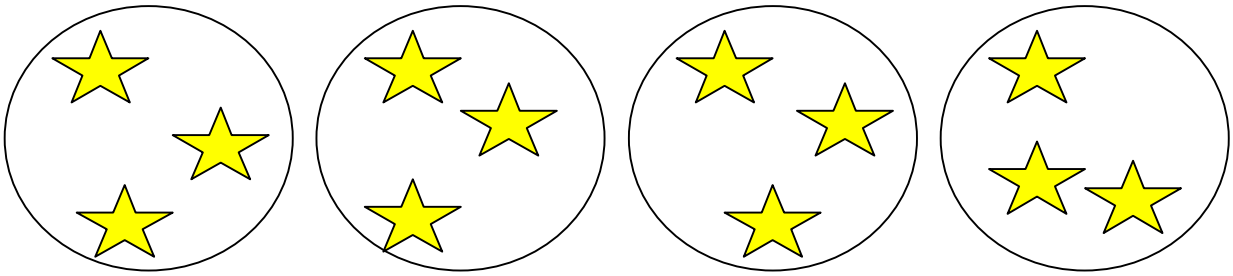
Next we look at using pictorial representations to solve problems

E.g. Share 12 star stickers equally between 4 children



You can also use a number line to count on:

How many 2s are there in 10? Answer: 5