Lowbrook Academy

We aim for all Lowbrook children to be able to:

- ***Develop mathematical fluency***
- ***Reason mathematically***
- ***Problem solve***
- ***Make connections across mathematical ideas***
- ***Apply knowledge in other subject areas***

MATHS INFORMATION BOOKLET

YEAR 1

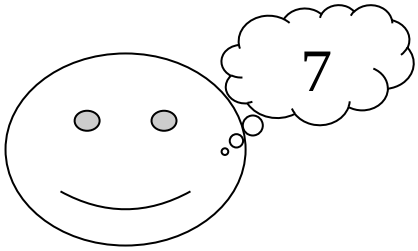
YEAR 1 STRATEGIES

Here are the strategies that you can use to help develop your child's addition, subtraction, multiplication and division skills.

ADDITION

Adding using your fingers

For example 7+6=13. Label the number sentence 'S, C, T' (Starting, Counting and Target). Ask your child to put the starting number in their head and the counting number on their fingers. Count on using fingers and their answer is the target number.



Missing number addition

For example 7 + _____ = 13. Label the number sentence 'S, C, T' (Starting, Counting and Target). Ask your child to put the starting number in their head. Then they need to count forwards on their fingers until they reach the 'target' number. The number on their fingers when they reach their target number is the missing counting number.

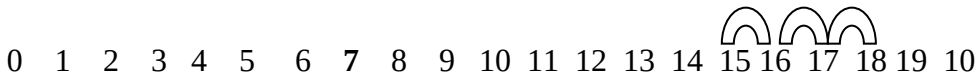
Counting objects such as toys, counters, teddy bears.

For example 6 + 3

Using objects. I put 15 cubes in a bag and then put 3 more in. How many do I have now? (Count on from 15)

Counting on using a number line

e.g. 15 + 3



Counting on using a number square

e.g. 65 + 22

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
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

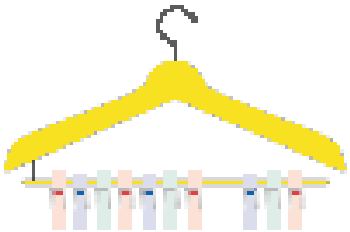
- Moving down one square is adding on 10
- Moving to the right one square is adding on 1

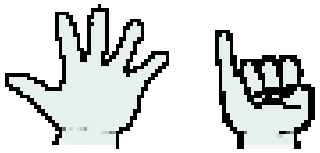
Count on using a number square by adding two tens and then two ones.
Or by doing this mentally, by putting 65 in your head and counting on two tens and then adding two Ones.

- Numbers can be added in any order.

Number bonds of 10 (the two numbers that add together to make 10)

Use fingers and objects such as toys or counters.
For example 10 + 0, 9 + 1, 8 + 2 etc.….





Inverse:	
10 - 6 =?	10 - ? = 6

Adding 10 to a number

If I start at 37 and count 10 steps on a number track where will I stop?
Can you use a hundred square to work out 37 add 20?
The children need to identify when you add ten to a number the **ones** stay the same.

Key vocabulary: add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line

Key skills for addition at Year 1:
• Read and write numbers to 100 in numerals, including in words.
• Recall bonds to 10 and 20, and addition facts within 20.
• Count to and across 100.
• Count in multiples of 1, 2, 5 and 10 to 100.
• Solve simple 1-step problems involving addition, using objects, number lines and pictorial representations.

SUBTRACTION (TAKING AWAY)

Taking away using objects and fingers.

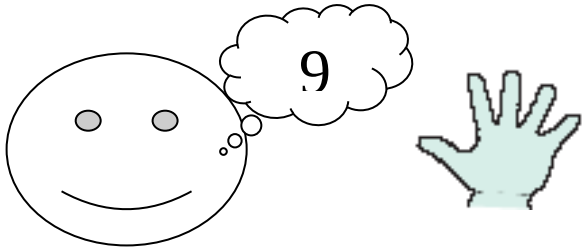
12-3

Whatever is used, make sure that the children can still see what they have taken away.

Taking away by counting back using fingers or a number line

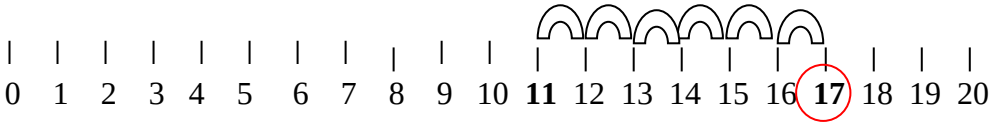
For example 9 – 5 = 4. Label the number sentence S, C, T (Starting, Counting and Target). Ask your child to put the starting number in their head and the counting number on their fingers. Count back using their fingers until they have no fingers left and have reached their target number.

S		C		T
9	**-**	**5**	**=**	**4**



Circle your starting number and bounce back as many bounces as your counting number tells you. The number you land on is your target number.

17 – 6 = 11



Partitioning to help with subtraction.

Calculation 43 - 21 =

20 1

Only partition the second number

Take away the tens then take away the ones from that number.

43 – 20 = 23

23 – 1 = 22

Key vocabulary: equal to, take, take away, less, how many more, how many fewer / less than, most, least, count back, how many left, how much less is_?

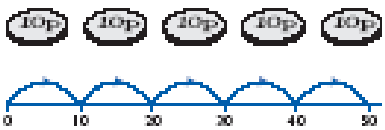
Key skills for subtraction at Year 1:

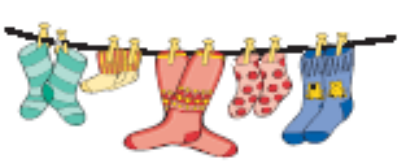
- Given a number, say one more or one less.
- Count to and over 100, forward and back, from any number.
- Represent and use subtraction facts to 20 and within 20.
- Subtract with one-digit and two-digit numbers to 20, including zero.
- Solve one-step problems that involve addition and subtraction, using concrete objects (i.e. bead string, objects, cubes) and pictures, and missing number problems.
- Read and write numbers from 0 to 20 in numerals and words.

MULTIPLICATION

Counting on in 2's 5's and 10's by grouping objects.

Count to find out how many there are in several groups of 2's, 5's, 10's etc. using multi-link cubes, socks, fingers, coins etc.…



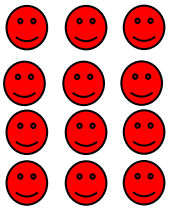


Repeat addition

6 x 5 = 30
6 + 6 + 6 + 6 + 6

Arrays

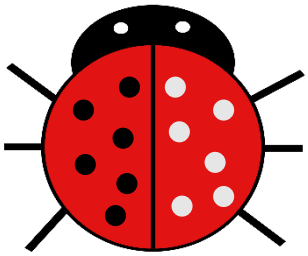
Draw an array using small pictures or dots to represent the multiplication
For example 3 x 4 = 12



Doubling

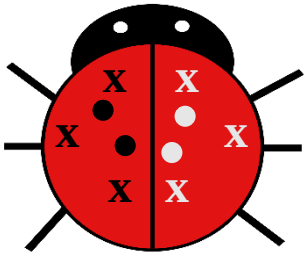
Using the doubling ladybird

Draw dots on the left wing of the lady bird to show the number you wish to double. Draw these again on the other wing and count them up.
e.g. Double 6:



= 12

To double large numbers, partition the number into 10s and 1s. Use a cross to represent a 10 and a dot to represent a 1 and follow the same method as above. Count in 10s to count up all the crosses and then count in 1s to count up the dots.
e.g. Double 32:



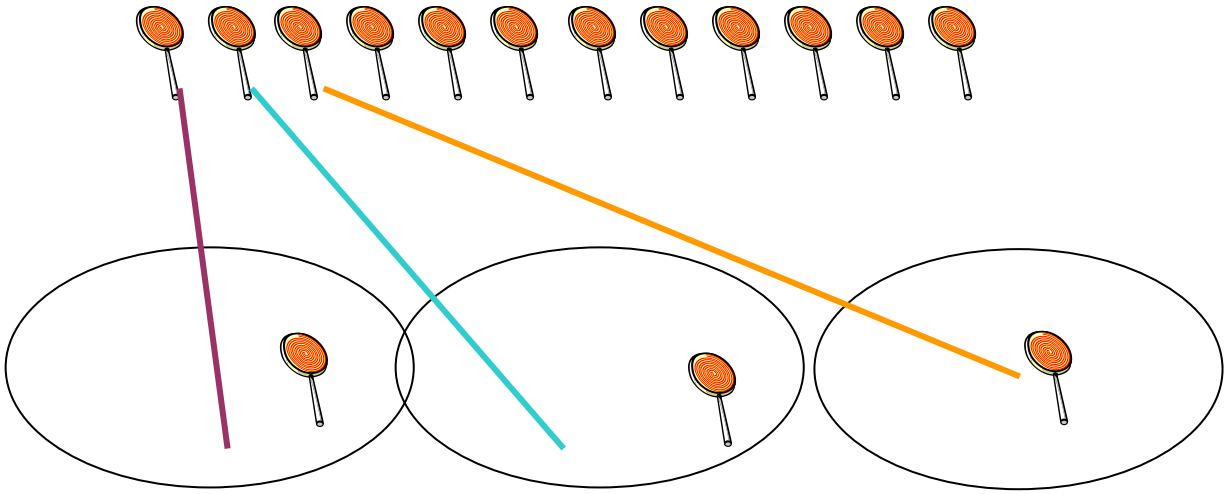
Key vocabulary: of, lots of, array, count

Key skills for multiplication at Year 1:
• Count in multiples of 2, 5 and 10 to 100.
• Solve one-step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays, with the support of the teacher.
• Make connections between arrays, number patterns, and counting in twos, fives and tens. Begin to understand doubling using concrete objects and pictorial representations.

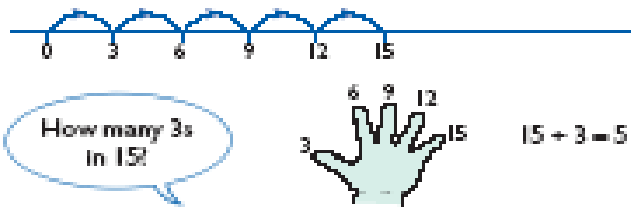
DIVISION (SHARING)

Sharing a group of objects practically

12 ÷ 3 =



Counting on in 2's, 5's

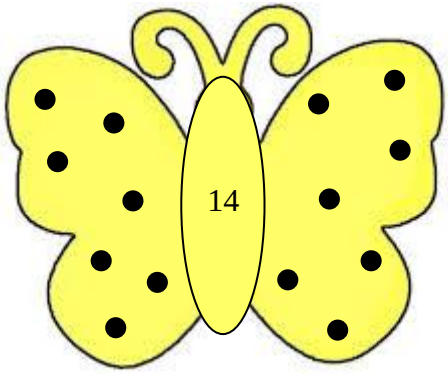


Halving

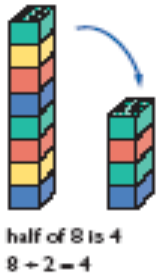
You can answer halving questions using the sharing method above; sharing equally between 2 groups.

Using the halving butterfly

Place the number you wish to halve in the body of the butterfly. Share the dots equally between the wings and then count the dots on one wing to find half.
e.g. Half of 14:



Halving **Quarters**



Half of 4 = 2
So quarter of 8 = 2
Show equivalents: two quarters = one half

Give your child a set of cubes, toys, etc. and ask them to find half (divide into two groups.)
Try and encourage your child to explain what they are doing and talk through how they are working out the answers.

Give your child a number problem to solve:

I have 8 sweets and I want to give my friend half of them. How many would I have left?

How can I divide my Pizza with my four friends?

Key Vocabulary: share, share equally, one each, two each…, group, groups of, lots of, array

Key number skills needed for division at Year 1:

- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations, arrays, with the support of the teacher.
- Through grouping and sharing small quantities, pupils begin to understand division, and finding simple fractions of objects, numbers and quantities. (1/2, 1/4)
- They make connections between arrays, number patterns, and counting in twos, fives and tens.

At Lowbrook we aim to equip the children with a range of techniques and various methods of problem solving to enable them to choose which strategies they prefer to use. Our aim is for all our children to develop resilience and independence and to have confidence in their own abilities.

Magma Maths
Using Magma Maths for homework have made it possible for you to watch all methods of calculations we use in Year 1. It improves mathematical understanding providing interactive learning with instant feedback and allows children to show their thinking on a digital canvas.

Games to play with your children to support mathematical understanding:

Uno	Recognizing and matching numbers.
Dominoes	Supporting counting and associating patterns with numbers.
TT Rockstars	Practicing of X Tables
Snakes and Ladders	Counting numbers up to 100.
Playing cards	Remove picture cards and play snap if the total of card is 10.
Shape Hunt	Hunt for shapes around the house supporting shape recognition and vocabulary.
Building Blocks	Build towers of a given height and compare. Supporting counting comparison, addition and subtraction.

Useful Websites.
https://www.topmarks.co.uk/
https://www.bbc.co.uk/bitesize/subjects/z6vg9j6
https://www.theschoolrun.com/
https://www.ttrockstars.com