



*St Margaret Clitherow's Catholic
Voluntary Primary Academy*

Y1 Maths

Calculation Expectations

This booklet will explain how addition, subtraction, multiplication and division are taught in Year 1. There are two methods given; one for those children 'emerging' and the end of year expectation.

The 'emerging' method is for those children who are still developing their understanding of the four calculations. When children are ready, they will begin to practise the expected method.

If you have any further questions, please contact your child's class teacher.

Overview of calculation methods for Year 1

Addition (+)

Emerging	End of year expectation
Objects	Empty number line

Subtraction (-)

Emerging	End of year expectation
Objects	Empty number line

Multiplication (x)

Emerging	End of year expectation
Objects	Array

Division (\div)

Emerging	End of year expectation
Objects	Grouping

Addition

Year 1



Addition in Year 1

Key Vocabulary

add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line, increase, quantity

Key skills for addition at Year 1

- Read and write numbers to 100 in numerals, including 1-20 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
- Solve simple 1-step problems involving addition, using objects, number lines and pictorial representations.

Children should:

- Have access to a wide range of counting equipment, everyday objects, number tracks and number lines, and be shown numbers in different contexts.
- Read and write the addition (+) and equals (=) signs within number sentences.
- Interpret addition number sentences and solve missing box problems, using concrete objects and number line addition to solve them:

$$8 + 3 = \square \quad \square + 4 = 9 \quad \square \quad \square + \square = \square$$

Addition

Year 1



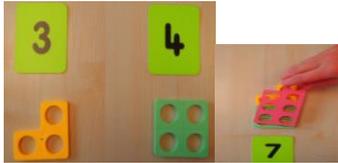
POS - Add with numbers up to 20.

Key Vocabulary

add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line, increase, quantity

Notes - Children must understand the concept of addition and have lots of practical experience combining two sets of objects to find the total.

Examples:



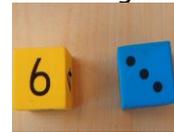
Use objects/Numicon to add two groups.



Begin to use fingers to represent two sets and add together.



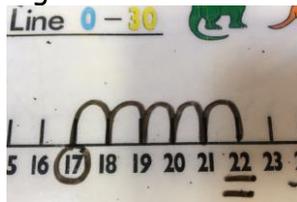
Count on when one group of objects is hidden.



Hold the greatest number in your head and count on the spots.

Emerging - Count on in ones using a numbered number line.

E.g. $17 + 5 = 22$

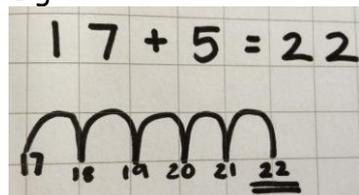


Steps to success:

Circle the **greatest** number
Count on the number that you're adding
Underline the answer

End of year expectation - Use an empty number line.

E.g. $17 + 5 = 22$



Steps to success:

Start on the **greatest** number
Count on the number that you're adding

Children may then begin to make more 'efficient' jumps using their knowledge of addition facts e.g.

Subtraction

Year 1



Subtraction in Year 1

Key Vocabulary

equal to, take, take away, less, minus, subtract, decrease, leaves, difference between, 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

- 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.

Mental skills

- Say one **more** and one **less** than a given number.
- Daily practise of counting back from different starting points.
- Children should recall subtraction facts up to **and within** 10 and 20, and should be able to subtract zero.

Subtraction

Year 1

POS - Subtract 1 and 2-digit numbers from numbers up to 20.

Children consolidate understanding of subtraction practically, showing subtraction on bead strings, using cubes etc. and in familiar contexts, and are introduced to more formal recording using number lines.

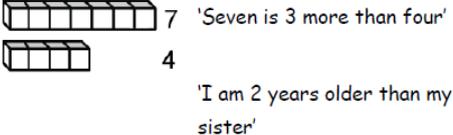
Key Vocabulary

equal to, take, take away, less, minus, subtract, leaves, difference between, how many more, how many fewer / less than, most, least, count back, how many left, how much less is ?

Notes:

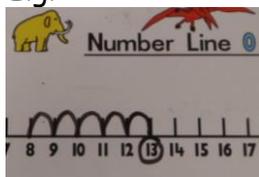
Children must understand the concept of subtraction and have lots of practical experience of taking away and finding the difference.

Examples:

	
Take away a number from a group of objects.	Find the difference between in a range of familiar contexts.

Emerging - Count back in ones on a numbered number line.

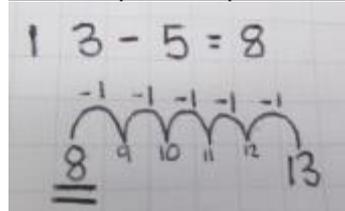
E.g. $13 - 5 =$



Steps to success:

- start on the greatest number
- hop back in ones

End of year expectation - Subtract by counting back on an empty number line.



Steps to success:

- start on the greatest number
- hop back in ones

Multiplication

Year 1



Multiplication in Year 1

Key Vocabulary

groups of, lots of, times, array, altogether, multiply, count, quantity

Key skills for multiplication at Year 1

- Double 1-digit numbers.
- Complete simple number patterns.
- 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.

Mental skills

To count on in multiples of 2, 5 and 10.

Multiplication

Year 1



POS - Show multiplication using arrays.

Give children experiences of counting equal group of objects in 2s, 5s and 10s. Present practical problem solving activities involving counting equal sets or groups.

Key Vocabulary

groups of, lots of, times, array, altogether, multiply, count, quantity

Emerging - Use objects and pictures to show multiplication.

E.g. How many legs will 3 teddies have?



$$2 + 2 + 2 = 6$$

End of year expectation - Use an array to show multiplication.

E.g. There are 3 sweets in one bag. How many sweets are there in 5 bags?

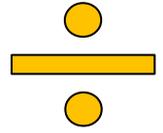
3	x	5	=	15	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	

The children draw 3 lots of 5 (3 rows of 5).

They can then see that 3×5 is the same as 5×3

Division

Year 1



Division in Year 1

Key Vocabulary

share, share equally, one each, two each..., group, groups of, lots of, array, decrease

Key skills for division at Year 1:

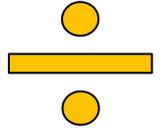
- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher
- Through grouping and sharing small quantities, pupils begin to understand division, and finding simple fractions of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

Mental skills

Be able to count in multiples of 2s, 5s and 10s.

Division

Year 1



POS - Group and share small quantities

Children should:

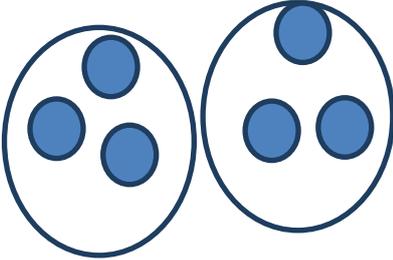
- Use lots of practical apparatus, arrays and picture representations
- Be taught to understand the difference **grouping** objects (How many groups of 2 can you make?) and **sharing** (Share these sweets between 2 people)
- Find **half** of a group of objects by sharing into 2 equal groups.

Key Vocabulary

share, share equally, one each, two each..., group, groups of, lots of, array, quantity

Emerging - Use objects to solve halving by sharing into 2 equal groups.

$$6 \div 2 = 3$$



End of year expectation - Use objects to solve problems involving grouping.

E.g. $12 \div 4 =$ This is asking - "How many groups of 4 are in 12?"

Grouping

How many groups of 4 can be made with 12 stars? = 3

