

Sharing maths and discovering new things with your child will be a very rewarding experience.

The following slides offer some guidance on how we teach numbers and calculations at Key Stage 1.





Numbers and Counting

Children need plenty of experiences with numbers – counting, looking for numbers out and about, ordering, comparing and estimating.





6 + 3 = 9

Children start by counting all



To become more efficient at solving addition calculations, children are encouraged to learn by heart addition facts for all the values to 5 in Yr R, to 10 in Yr 1 and to 20 by the end of Yr 2. These facts can then be applied to larger numbers.



Children need to learn to count on, starting from any number. Counting on from the largest number reduces errors, but some children prefer starting at the lower number, where they feel more confident.



Using a variety of resources and images, children learn to subitise values to 10 (recognise amounts without counting).





5 + 2 = 7

Using small step changes children can use facts they know to solve others.







Addition of 2-Digit Numbers

To support addition of two 2-digit numbers in Year 2 the children learn to count on in tens from any 2-digit number. They also use their learnt number facts. For example for 35 + 20 they may count on saying "35, 45, 55" or may think "I know 3 + 2 is 5, so 3 tens + 2 tens will be 5 tens." Understanding Place Value (PV) is important prior to this i.e. knowing how many tens and how many ones there are in a number. Children use place value resources (Dienes or Numicon) to help them.







Eventually children will be shown vertical methods, but more time is spent on understanding the value of the digits and developing mental strategies before formal recording. Often there is no need to record a 2-digit addition calculation vertically if a child is able to solve the calculation in their head, more efficiently.

> 54 <u>+ 23</u> 77







Children understand that subtraction involves taking away an amount (part) from a whole. They use practical resources to solve problems.



Subtraction of 2-Digit Numbers

To support subtraction of a 2-digit number, in Year 2, the children learn to count back in tens from any 2digit number. They also use their learnt subtraction facts. For example for 47 - 20 they may count back saying "47, 37, 27" or they may say "I know 4 - 2 is 2, so 4 tens take away 2 tens will be 2 tens." Children use place value resources (Dienes or Numicon) to help them.







 $\begin{array}{c}
 40 - 20 = 20 \\
 7 - 4 = 3
\end{array}$ 23

Eventually children will be shown vertical methods, but more time is spent on understanding the value of the digits and developing mental strategies before formal recording. Often there is no need to record a 2-digit subtraction calculation vertically if a child is able to solve the calculation in their head, more efficiently.



Multiplication

Children learn to count forward and back in 2s, 5s and 10s. In Year 2 they also count in 3s. By the end of Year 2 the children are expected to be able to recall at random the multiplication facts for the 2, 5 and 10 times tables and the related division facts e.g. $7 \times 5 = 35$ so $35 \div 5 = 7$.

Children use resources to put objects into equal groups. They use repeated addition to find the total or count in multiples of 2, 5 or 10, if known. When first introduced to the multiplication sign they are encouraged to use the words 'groups of' or 'sets of' rather than 'times' to help with understanding.







At the beginning children learn to divide in a very practical context, by sharing or grouping whole amounts equally. They are taught to make connections between multiplication facts and division facts, understanding that we are breaking up the whole into smaller parts. Remainders are not taught until KS2, but children may visit this concept as they realise that not all numbers can be divided equally.

Sharing

If 8 toy cars are shared equally between 2 children, how many cars do they each get?

Grouping

If 12 eggs are packed into boxes of 6, how many boxes do we need?



By the end of Year 2, children are expected to recall division facts for the 2, 5 and 10 times tables, creating a family of 4 (fact family).

2 x 6 = 12 6 x 2 = 12 12 ÷ 2 = 6 12 ÷ 6 = 2



Children learn about halves, quarters and thirds, by practically dividing whole amounts into equal parts. They also explore fractions of shapes and measures and learn to recognise errors (non examples).

