

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


$$
6+3=9
$$

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.

$5+1=6$


$4+2=6$

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.
$54+23=77$



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
$+23$
77


## Subtraction

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

$9-4=5$
They learn to count back on a number line.

$6-2=4$
Children use learnt addition facts to help them to recall the subtraction facts, using visual aids and practical resources.

$$
10-1=9
$$



## 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.

47-24=23


$$
\left.\begin{array}{r}
40-20=20 \\
7-4=3
\end{array}\right\} \quad 23
$$



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 2 s , 5 s 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.


## Division

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?


By the end of Year 2, children are expected to recall division facts for the

$\longrightarrow \quad$| $2 \times 6=12$ |
| :--- |
| $6 \times 2=12$ |
| $12 \div 2=6$ |
| $12 \div 6=2$ |

## Fractions

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).


| 8 |  |  |  |
| :--- | :--- | :--- | :--- |
| 4 |  | 4 |  |
| 2 | 2 | 2 | 2 |


| 8 |  |
| :---: | :---: |
| 4 | 4 |



