

St Francis RC Primary School – Calculation Policy

Subtraction

Year 1

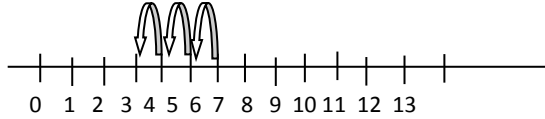
Bridging/Number lines/100 square/Counters /Cubes
Count back and on

Understand that subtraction as 'take away'

Children to use number lines and practical resources to 'Count back' and see this as finding the difference.

Teacher to model using a number line. Then children to use number lines for their own calculation.

eg. $6 - 3 = 3$ $-1 -1 -1$



Count back

Count out cubes along a number line for $13 - 9$
($13 - ? = 9$) Find the difference by taking cubes away to make the same amount.

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

Count on ($9 + ? = 13$)

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

Year 2

Bridging/100 square/Double/Halve/Count on and back

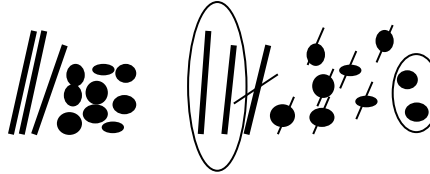
Counting back

Use base 10 equipment and number lines to help jump back in ones, then groups of one, then tens and ones in one jump and also bridging through ten.

Eg. $47 - 23 = 24$



Eg. $39 - 17 = 22$

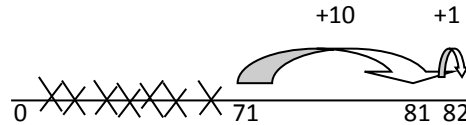


Counting on (finding the difference)

When numbers are close together or near multiples of ten.

Include 0 on the number line with the section up to your smaller number crossed out so that they associate it with taking away.

$82 - 71 = 11$



Year 3

Children will begin to use the expanded column method of decomposition with TU-TU calculations initially.

Base 10 equipment and arrow cards should be used to support this process and will **begin with examples that don't require an exchange.**

$$\begin{array}{r} 89 = 80 + 9 \\ - 57 \\ \hline 30 + 2 = 32 \end{array}$$

From this children will begin to solve problems which involve exchange, using the base 10 equipment as an aid.

Step 1

$$\begin{array}{r} 71 = 70 + 1 \\ - 46 \\ \hline 40 + 6 \end{array}$$

Step 2

$$\begin{array}{r} 71 = 60 + 11 \\ - 46 \\ \hline 20 + 5 = 25 \end{array}$$

Exchange a ten for ten units

Recorded like this:

$$\begin{array}{r} 60 \quad 1 \\ 71 = \cancel{70} + 1 \\ - 46 \\ \hline 20 + 5 = 25 \end{array}$$

NB Number line for numbers close together or near multiples of 10.

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Subtraction		
Year 4	Year 5	Year 6
<p>Number lines/ Count on and back $135 - 76$ $135 - 70 = 65$ $65 - 6 = 59$ Column</p> <p>Expanded column method (partitioning)</p> $\begin{array}{r} 754 \\ - 86 \\ \hline \end{array}$ <p>Step 1 $700 + 50 + 4$ $\begin{array}{r} 700 + 50 + 4 \\ - \quad 80 + 6 \\ \hline \end{array}$</p> <p>Step 2 $700 + 40 + 14$ (adjust from T to U) $\begin{array}{r} 700 + 40 + 14 \\ - \quad 80 + 6 \\ \hline \end{array}$</p> <p>Step 3 $700 + 140 + 14$ (adjust from H to T) $\begin{array}{r} 700 + 140 + 14 \\ - \quad 80 + 6 \\ \hline 600 + 60 + 8 = 668 \end{array}$</p> <p>Recorded like this:</p> $\begin{array}{r} 600 \quad 140 \quad 1 \\ \cancel{700} + \cancel{50} + 4 \\ - \quad 80 + 6 \\ \hline 600 + 60 + 8 = 668 \end{array}$ <p>Decimals</p> $\begin{array}{r} \text{£}8.95 \quad 8 + 0.9 + 0.05 \quad 8 + 0.8 + 0.15 \\ - \text{£}4.38 \quad - 4 + 0.3 + 0.08 \quad 4 + 0.3 + 0.08 \\ \hline 4 + 0.5 + 0.07 = \text{£}4.57 \end{array}$ <p>Children should: Be able to subtract numbers with different numbers of digits, Find the difference between two three digit sums of money, Know that decimal points line up under each other. NB Number line for numbers close together or near multiples of 10.</p>	<p>Number line/Bridging/Count on and back/Round Column Compact column method (decomposition)</p> $\begin{array}{r} 6 \quad 141 \\ \cancel{1} \cancel{7} \cancel{4} \\ - 286 \\ \hline 1468 \end{array} \quad \begin{array}{r} 2 \quad 131 \\ \cancel{8} . \cancel{4} 2 \\ - 1.76 \\ \hline 1.66 \end{array}$ <p>Children should: Be able to subtract numbers with different numbers of digits, Find the difference between two three digit sums of money, Know that decimal points line up under each other. NB Number line for numbers close together or near multiples of 10. Eg. $1209 - 398 = 811$</p> <p>$398 \quad 400 \quad \quad \quad 1200 \quad 1209$</p> <p>NB if children have not reached the stage of compact method they will continue with expanded.</p>	<p>Number line Column (Expanded and compact) Compact column method (decomposition)</p> $\begin{array}{r} 5 \quad 131 \\ \cancel{1} \cancel{6} \cancel{4} 67 \\ - 2684 \\ \hline 13783 \end{array}$ <p>Children should: Be able to subtract numbers with different numbers of digits, Find the difference between two three digit sums of money, Know that decimal points line up under each other. NB Number line for numbers close together or near multiples of 10. Eg. $3002 - 1997 = 1005$</p> <p>$1997 \quad 2000 \quad \quad \quad 3000 \quad 3002$</p> <p>NB if children have not reached the stage of compact method they will continue with expanded.</p>

