

Crudgington Primary School

Calculation policy

Stages Year 2

Policy reflects: concrete (do it!) abstract (see it!) visual (remember it!) communication (record it!)

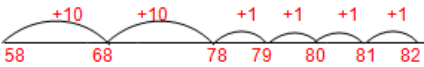
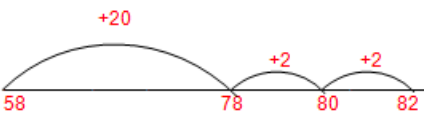
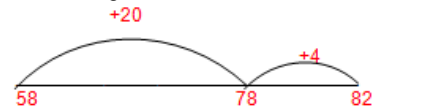
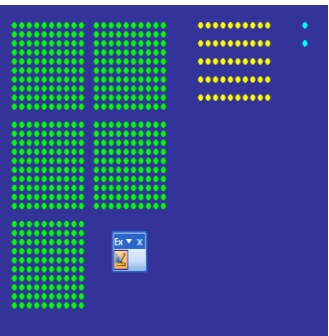
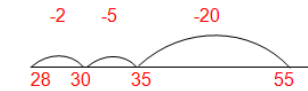
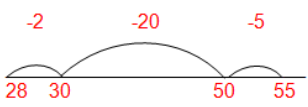
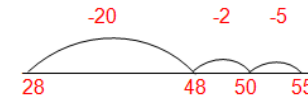
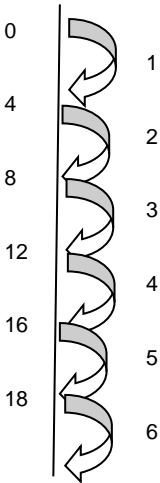
Addition	Subtraction	Multiplication	Division
<p style="text-align: center;"><u>Year 2</u></p> <p>Emphasis on mental calculation.</p> <p>Combining sets to make a total.</p> <p>Progression in use of informal recording including the number line.</p> <p>Answers to be recorded as part of a number sentence.</p> <p>Reordering strategy.</p> <p>Adding: $TU + TU = TU$ and when secure moving on to $TU + TU = HTU$ $HTU + TU = HTU$</p> <p>Leaf method</p> <p>$34 + 63 =$</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">30 ○ 4</div> <div style="text-align: center;">+</div> <div style="text-align: center;">60 ○ 3</div> <div style="text-align: center;">=</div> <div style="text-align: center;">90 ○ 7</div> <div style="margin-left: 10px;">97</div> </div> <p>Sticks and smiles (sticks to the tens, smiles to the units)</p> <div style="text-align: center;"> 90 $34 + 63 =$ 7 </div>	<p style="text-align: center;"><u>Year 2</u></p> <p>Place value, partitioning and recombining.</p> <p>Rearranging of numbers so that 36 can be seen as 30 and 6 or as 20 and 16.</p> <p>Partitioning of numbers into T and U then HTU. Know what each digit represents.</p> <p>TU – TU HTU – TU</p> <div style="text-align: center;"> </div> <p>Partitioning the second number strategy $76 - 43 =$ $76 - 40 = 36$ $36 - 3 = 33$ When it is a subtraction calculation, underline the second number – this is the only number that can be partitioned.</p> <p>$73 - 46 =$ $73 - 40 = 33$</p>	<p style="text-align: center;"><u>Year 2</u></p> <p>Using tables facts 2s, 10s and 5s and begin 3s and 4s.</p> <p>Be able to partition a 2 digit number.</p> <p>Doubles are same as x2.</p> <p>Vocabulary of double, multiply, groups of, sets of, lots of etc.</p> <p>Partitioning strategy for doubling.</p> <p>Double 35</p> <div style="text-align: center;"> </div> <p>A lolly costs 21p. How much do 3 cost?</p> <div style="text-align: center;"> </div> <p>Decision making Children investigate statements and solve word problems using appropriate methods such as mental/ jottings/ numberline.</p>	<p style="text-align: center;"><u>Year 2</u></p> <p>Understand division as repeated addition, grouping.</p> <p>Table facts (see multiplication).</p> <p>Division facts corresponding to the 2, 10, 5, 3 and 4 times tables.</p> <p>Use x and ÷ signs.</p> <p>Count a handful of beads by grouping them in fives. How many groups of 5 are there? How many are left? Can you write a division sentence to describe this?</p> <p>How many lengths of 6 m can you cut from 48m of rope? Write the number fact that represents this. How did you work it out?</p> <p>Record using the correct division symbol.</p> <p>Use of number lines to record repeated addition.</p> <p>Practical apparatus to support concept. Introduce the vocabulary of remainder.</p> <p>Practical contexts to be used so that the calculation is not in the abstract.</p> <p style="text-align: right;"><u>Grouping</u></p>

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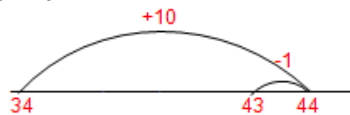

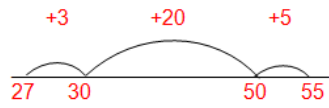
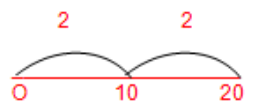
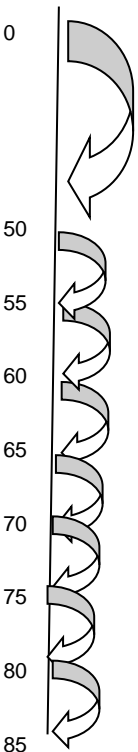
<p>24 + 58</p>  <p>adding in 10s and 1s</p>  <p>add 20, bridge the 10</p>  <p>add 20 and then 4</p> <p>Record partitioned steps in number sentences underneath each other and add mentally.</p> <p>24+58= 20+50=70 4+8=12 70+12=82</p> <p>Introduce column addition without crossing the boundary</p> $\begin{array}{r} 24 \text{ (20+4)} \\ +53 \text{ (50+3)} \\ \hline 77 \text{ (70+7)} \end{array}$ <p>Check answers by repeating addition in different order or by an equivalent calculation.</p> <p>Adjustment strategy</p>	<p>33 - 6 = 27</p>  <p>Counting back (left) from the larger number in partitioned steps of the smaller number to reach the unknown.</p> <p>55 - 27</p> <p>Rearranging strategy <i>Partitioning the 27 into 20, 5 and 2.</i></p>  <p>or</p>  <p>or</p> 	<p>Grouping using a vertical number line</p> <p>20 ÷ 4 = 6</p>  <p>"How many groups of 2 are there in 8?"</p> <p>The number of jumps tells you the number of groups.</p> <p>16 ÷ 2 =</p> <p>"How many groups of 2 are there in 16?" "I know that dividing by 2 is the same as halving."</p>
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<p>$34 + 9 =$</p>  <p>$+ 19/ + 11/21$</p> <p>Near doubles</p> <p>$13 + 14 = \square$</p> <p>Double $14 = 28$</p> <p>$28 - 1 = 27$</p> <p>or</p> <p>Double $13 = 26$</p> <p>$26 + 1 = 27$</p> <p>Adding zero leaves a number unchanged/ adding ten to a number keeps units digit constant.</p> <p>Decision making (mental, jottings, numberline) Statements and word problems.</p>	<p>$55 - 27 = 28$</p> <p>Find the difference (counting on to the right) Model with numbers that are close together.</p> <p>$55 - 27 = 28$</p>   <p>Subtract mentally pairs of multiples of 10 and 100, using known facts</p> <p>$60 - 20 = 40$ because $6 - 2 = 4$</p> <p>$700 - 300 = 400$</p> <p>Continue to use the vertical number line.</p> <p>Use of apparatus (Diennes) to understand rearrangements, e.g. 55 as 40 and 15, not as part of calculations.</p> <p>(</p> <p>Decision making Statements and word problems.</p>	 <p>2 double jumps because $5 \times 2 = 10$</p> <p>Use what we already know</p> <p>$85 \div 5 = 17$</p>  <p>($5 \times 10 = 50$) 10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p>
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