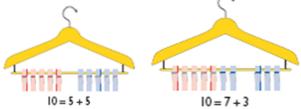
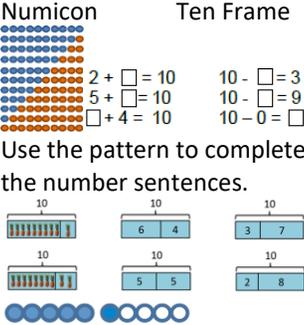
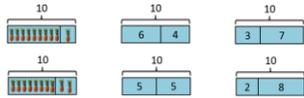
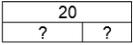
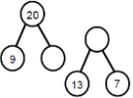
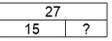
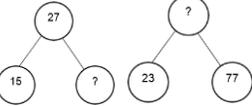
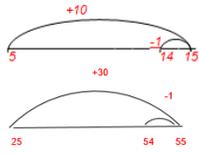
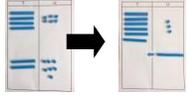
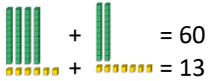


**John Randall Primary School and Nursery**  
**Addition Key Stage 1 Calculation Policy**



<p><b>EYFS</b></p> <p><b>Appendix 2:</b> Pupil target grids</p>	<p><b>Reception: ELG</b> Numbers to 20: place them in order and say which number is one more or one less than a given number. Using quantities and objects, <b>they add</b> and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.</p> <p><b>Exceeding:</b> Estimation and checking quantities by counting up to 20. Combining groups of 2, 5 or 10 or sharing into equal groups.</p>	
<p>Year</p>	<p>1</p>	<p>2</p>
<p>Layers of vocabulary</p>  <p><b>Appendix 1a</b> Beck's Tiers of Vocabulary</p> <p><b>Appendix 1b:</b> Vocabulary book</p>	<p><b>Basic to subject specific (Beck's Tiers):</b> +, add, more, plus, make, sum, total, altogether, score, double, near double, one more, two more... ten more... <b>How many more to make...? How many more is... than...? How much more is...?</b></p> <p><b>Instructional vocabulary:</b> start from, start with, start at, look at, point to, show me...</p> <p><b>Language of tests and questions</b> match, tick, draw, complete, write, circle, share, jumps, count on, use a ruler</p>	<p><b>Basic to subject specific (Beck's Tiers):</b> +, add, addition, more, plus, make, sum, total, altogether, score, double, near double, one more, two more... ten more... one hundred more... how many more to make...? <b>How many more is... than...? How much more is...?</b></p> <p><b>Instructional vocabulary:</b> tell me, describe, name, pick out, discuss, talk about, explain, explain your method, explain how you got your answer, give an example of... show how you...</p> <p><b>Language of tests and questions</b> tick, match, count, tick two, circle, write, draw, complete, use these numbers, shade, write, make, choose, circle the three, complete, write, tick all, complete the number sentence, put a digit, <b>How many...?</b></p>

NC 2014	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	Recording addition in columns supports place value and prepares for formal written methods with larger numbers.
Concrete, pictorial, abstract		Concrete, pictorial, abstract
Developing Conceptual/ Procedural Understanding	<p><b>Number bonds</b></p>  <p>We have 10 pegs on the coat hangers, how can we split them into 2 groups? Is there another way? How can we be sure we have got them all?</p>  <p>Numicon      Ten Frame</p>  <p>Use the pattern to complete the number sentences.</p>  <p>Use bonds of 10 to calculate bonds of 20.</p> $6 + 4 = 10$ $16 + \underline{\quad} = 20$ <p><b>Whole-part model</b></p>  <p>Fill in the missing numbers</p>  <p><b>Balance image for concept of equality.</b></p>  <p><b>Multilink /unifix</b></p>  <p>Fill in the missing numbers</p>  <p>All answers to be recorded in a number sentence following any informal recording.</p> <p><b>Adding more than two numbers</b></p> <p>Strategy to include looking for facts or bonds that are useful e.g. bonds up to and including 10, doubles or adding 10 to a given number.</p> $6 + 3 + 4 = 13$ $6 + 3 + 4 + 7 + 2 = 22$ <p>Children to show notation.</p>	<p><b>Adjustment strategy</b></p> $5 + 9 =$ $5 + 10 - 1 = 14$  <p>(Round and adjust) <b>Doubles then near doubles</b></p> $5 + 6 =$ $5 + 5 + 1 = 11$ $7 + 8 =$ $8 + 8 - 1 = 15$ $47 + 50 =$ <p><b>Re-arranging</b></p> $18 + 4 =$ <p>Tell me what you know about 4, e.g. 3+1, 2+2</p> $18 + 4 =$ <p>Rearrange the 4 into 2+2</p> $18 + 2 + 2 = 20 + 2 = 22$ $59 + 24 =$ Partition <p><b>Partition and recombine</b></p> <p>Record partitioned steps in number sentences then add mentally.</p> $40 + 20 = 60$ $6 + 7 = 13$ $60 + 13 = 73$ <p>Moving on to:</p> $46 + 27 = 60 + 13 = 73$  <p>Tens and units – exchanging</p> $46 + 27 = 73$  <p><b>Balance in the equation</b></p> $14 = 8 + 6, 7 + 6 = 8 + 5$ $\square = 13 + 9$ $3 + \square + 6 = 16$ $14 + \diamond = 15 + 27$ <p><b>Decision making</b></p>

					<p>the 24 into 20 +4 and rearrange the 4 into 1+3. So <math>59+24=</math> <math>59+20+1+3</math> <math>=</math> <math>59+1+20+3</math> <math>= 83</math></p>	<p>Using statements such as: Ben did <math>14 + 9 = 23</math> How could he have done it?</p>
Known facts	Represent & use number bonds and related subtraction facts within 20 Add and subtract 1 digit and 2 digit numbers to 20, including zero.			Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.		
Essential Knowledge	1 more	Number bonds: 5 and 6		10 more	Number bonds:20,12 and 13	
	Largest number first	Number bonds: 7 and 8		Add 1 digit to 2 digit by bridging	Number bonds: 14 and 15	
	Add 10	Number bonds:9 and 10		Partition second number and add tens then ones	Number bonds: 16 and 17	
	Ten plus ones	Use number bonds of 10 to derive bonds of 11		Add 10 and multiples of 10	Number bonds: 18 and 19	
	Doubles up to 10	Use number bonds to 20		Doubles up to 20 and multiples of 5	Partition and recombine	
				Add near multiples of 10		