


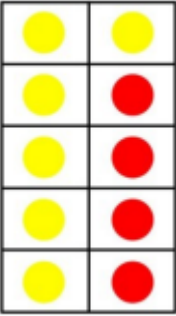
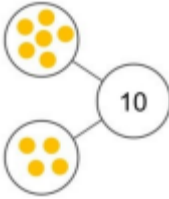
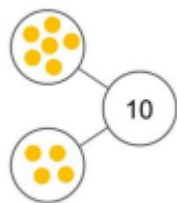
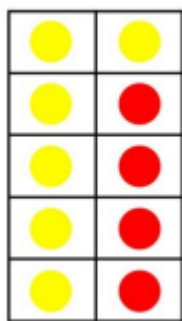


Coppice Valley Mathematics Calculation Guidelines

Progression through calculation for **addition**

- Children should understand that addition is commutative and therefore calculations can be rearranged e.g. $12 + 8 = 20$ is the same as $8 + 12 = 20$.
- Ensure that children understand the $=$ sign means is the same as/equal to, not makes and that children see calculations where the equals sign is in a different position e.g. $10 + 6 = 16$ and $16 = 10 + 6$
- Children should be encouraged to consider if a mental calculation would be appropriate before using written methods

<p>Reception</p>   <p>$3 + 2 = 5$</p>  <p>$6 + 2 = 8$</p>  	<p>Children should be exposed to practical calculation opportunities using a wide variety of equipment e.g. counters, cubes, role play etc.</p> <p>Children can then use pictures, dots, objects to help them combine two sets of objects by counting.</p> <p>Numicon can then be used to add two 1-digit numbers</p> <p>Children should be encouraged to use tens frame for addition and represent addition in the form of a part whole model</p>
<p>Year 1</p>	<p>Year 1 will focus predominantly on number bonds to 10 and 20</p> <p>Numicon and dienes will be used to find the number pairs to make 10 and 20</p>

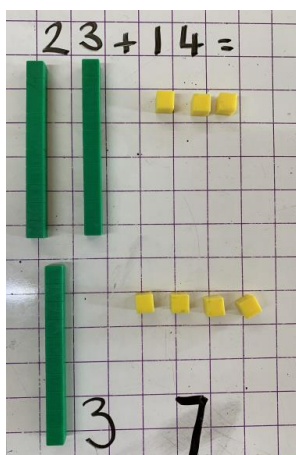


10	
6	4

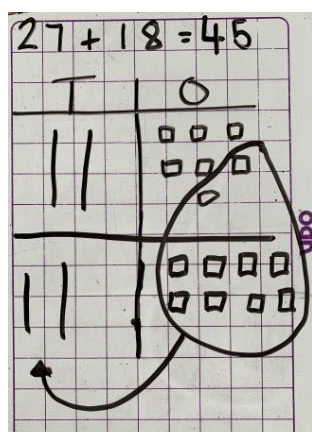
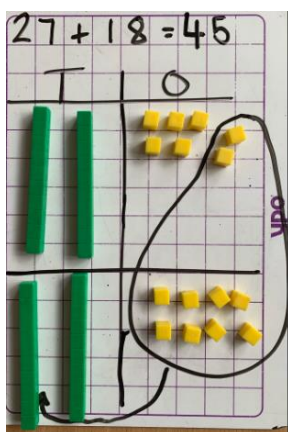
Children will use tens frames and part whole model to represent the number bond pairs

Children should then be encouraged to represent number bonds in the form of a bar model

Year 2



The children will add the ones first then the tens



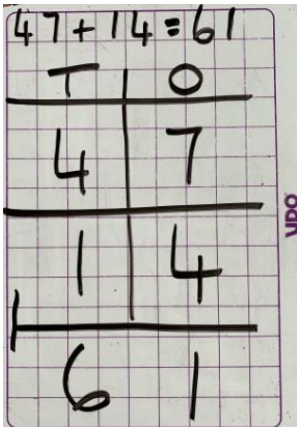
When the ones total more than 10 children should be encouraged to exchange 10 ones for 1 ten. This is the start of children understanding 'carrying' in the vertical addition.

Children will use the dienes equipment to support their calculations

Addition calculations will then be recorded through drawings of the dienes equipment

Children will also represent addition in the form of a part whole model and then a bar model

Year 3



H	T	O
3	2	8
2	3	7
+		
5	6	5
	1	

Children begin to represent addition in the form of vertical column addition using numbers

Children will begin to add three digit numbers and ones, tens and hundreds

If the digits in the column add up to 10 or more, then record the 'carry' digits below the line, using the words 'carry ten' or 'carry one hundred' (not 'carry one').

Children will also continue to represent addition in the form of a part whole model and then a bar model

Year 4

TH	H	T	O
4	6	4	2
2	7	4	9
7	3	9	1
1		1	

Children continue to solve addition in the form of the vertical column method

Children will add numbers with up to 4 digits using the formal written methods of column addition where appropriate.

Year 5

Tth	TH	H	T	O
4	4	6	4	2
	2	7	4	9
+				
4	7	3	9	1
	1		1	

Children will add whole numbers with more than 4 digits using column addition.

This method can be used for adding numbers with one and then 2 decimals places.

$$\begin{array}{r}
 \text{O.t h} \\
 6.25 \\
 3.96 \\
 + 2.47 \\
 \hline
 12.68 \\
 11
 \end{array}$$

Year 6

	7	5	4	9				1	9	.	0	1
+	6	8	5	3					3	.	6	5
1	4	4	0	2			+		0	.	7	0
	1	1	1					2	3	.	3	6
								1	1			
	£	1	2	.	8	5						
+	£		8	.	7	6						
	£	2	1	.	6	1						
		1	1		1							

Children are expected to continue to practise and use the formal written method of addition for larger numbers and decimals, and use these methods when solving problems, where appropriate.