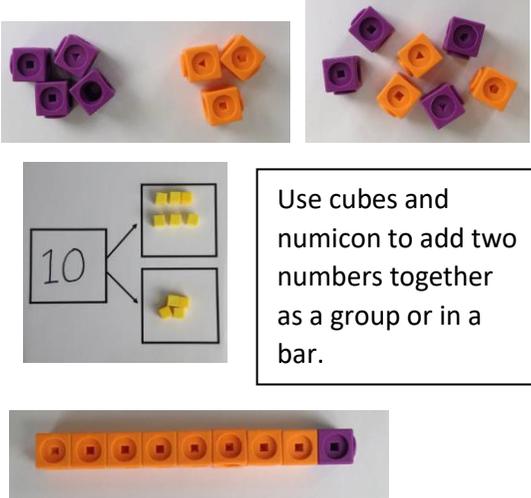
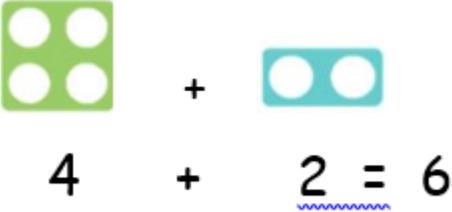
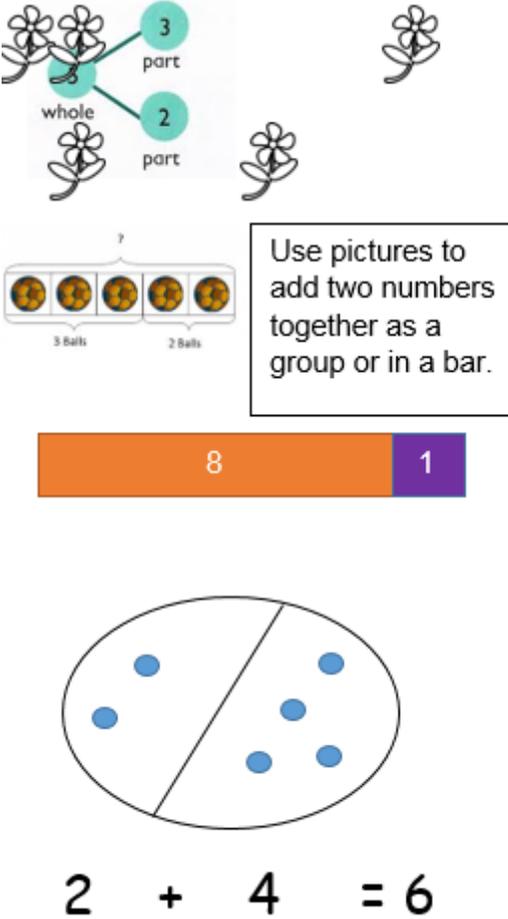
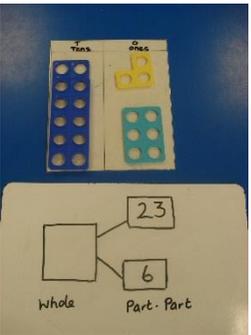
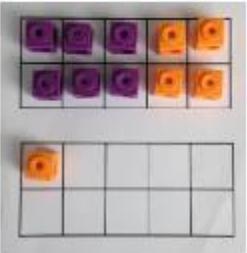
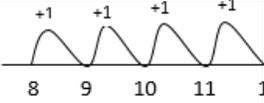
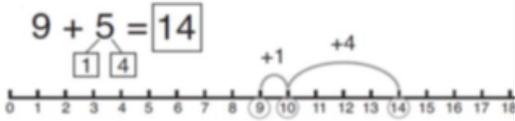
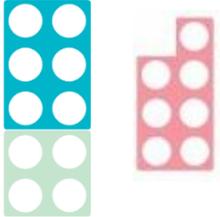
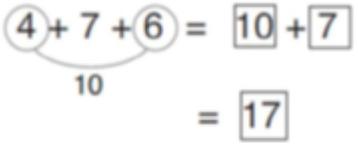
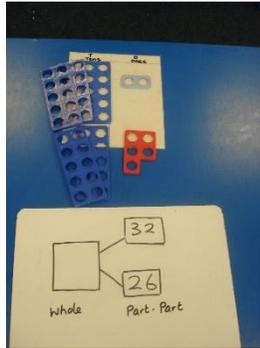


Yr	Addition Strategies	Enactive (Concrete)	Iconic (Pictorial)	Symbolic
R	<p>Finding the sum of two numbers. Combining 2 parts to make a whole: part-part whole model</p>	 <p>Use cubes and numicon to add two numbers together as a group or in a bar.</p>  $4 + 2 = 6$	 <p>Use pictures to add two numbers together as a group or in a bar.</p> $2 + 4 = 6$	<p>Children will annotate enactive and iconic with numerals as they develop this skill.</p>

<p>1</p>	<p>Using a range of manipulatives to add one and two digit numbers to 50.</p>	 <p>Using Numicon to investigate the creation of 10 and above. First steps to bridging.</p>  <p>$6 + 5 = 11$</p>  <p>Start with the bigger number and use the smaller number to make 10.</p>	<p>e.g. $8 + 5 = 13$</p>  <p>$13 + 6 = 19$</p> <p>$22 = 14 + 8$ (crossing 10's boundaries)</p> <p>Start at the larger number on the number line and count on in ones or in one jump to find the answer.</p> <p>Use pictures or a number line. Regroup or partition the smaller number to make 10.</p>  <p>$9 + 5 = 14$</p>	<p>$5 + 12 = 17$</p> <p>Place the larger number in your head and count on the smaller number to find the answer.</p> <p>$7 + 4 = 11$</p> <p>If I am at seven, how many more do I need to make 10. How many more do I add on now?</p>
<p>2</p>	<p>Adding three single digits</p>	<p>$4 + 7 + 6 = 17$</p> <p>Put 4 and 6 together to make 10. Add on 7.</p>  <p>$4 + 6 + 7$</p> <p>Following on from making 10, make 10 with 2 of the digits (if possible) then add on the third digit.</p>	 <p>Add together three groups of objects. Draw a picture to recombine the groups to make 10.</p>	 <p>$4 + 7 + 6 = 10 + 7 = 17$</p> <p>Combine the two numbers that make 10 and then add on the remainder.</p>

2

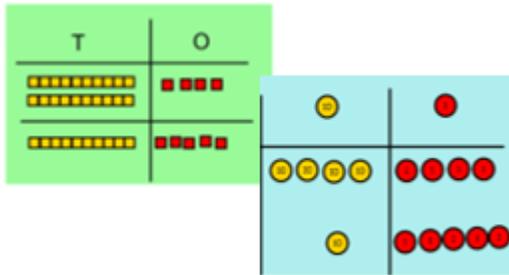
Adding two 2 digit numbers up to 100



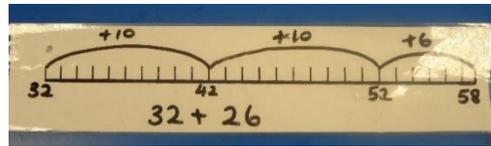
Use manipulatives to secure understanding of crossing 10's boundaries.

$24 + 15 =$

Add together the ones first then add the tens. Use Cuisenaire first before moving onto place value counters



Develop to include regrouping.



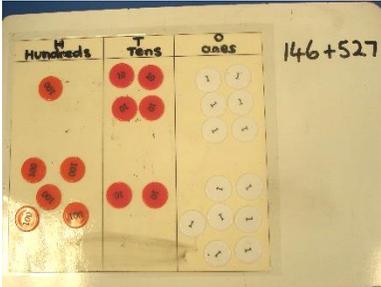
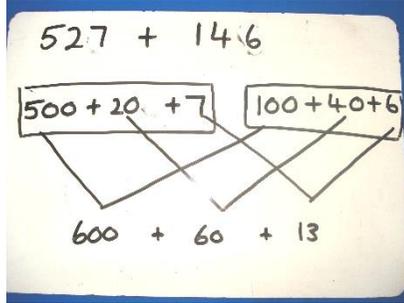
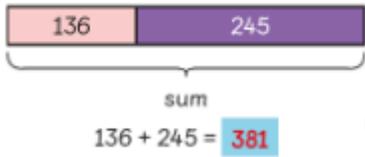
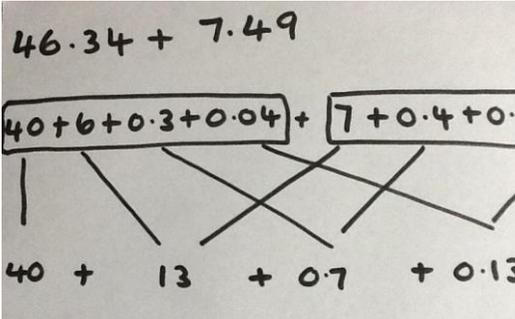
Year 2: Partition and Expanded method → Column method

$$\begin{array}{r}
 \text{T O} \quad \text{T O} \\
 44 + 15 \\
 \begin{array}{r}
 40 \quad 4 \\
 + 10 \quad 5 \\
 \hline
 50 \quad 9
 \end{array}
 \end{array}
 \longrightarrow
 \begin{array}{r}
 \text{T O} \\
 44 \\
 + 15 \\
 \hline
 59
 \end{array}$$

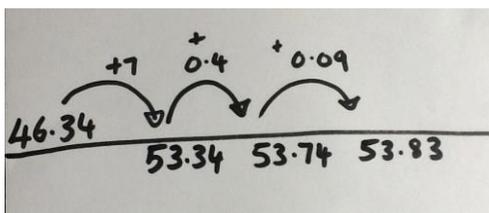
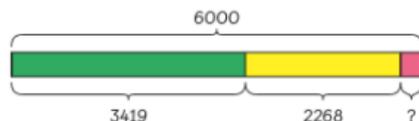
Not crossing 10's boundaries

Year 2: Expanded and column methods to add 2 digit numbers bridging 10

$$\begin{array}{r}
 \text{T O} \quad \text{T O} \\
 26 + 18 \\
 \begin{array}{r}
 20 \quad 6 \\
 + 10 \quad 8 \\
 \hline
 40 \quad 4 \\
 10
 \end{array}
 \end{array}
 \longrightarrow
 \begin{array}{r}
 \text{T O} \\
 26 \\
 + 18 \\
 \hline
 44 \\
 10
 \end{array}$$

<p>3</p>	<p>Column method including regrouping up 3 digit numbers including tenths</p>	 <p>Begin in the ones column. For every 10 created exchange for a 10 counter.</p> <p>As children move on to decimals and money, decimal place value counters can be used to support learning.</p>	 <p>This informal representation is used to clarify understanding and can be used alongside number lines. It will also aid fluency in mental calculations.</p> <p>The bar model reinforces the concept of part part whole.</p> <p>Find the sum of 136 and 245.</p> 	<p>Expanded and column methods to add up to 3 digit numbers bridging 10 and 100.</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"> <table border="0"> <tr><td>H</td><td>T</td><td>O</td></tr> <tr><td>2</td><td>5</td><td>6</td></tr> <tr><td>+1</td><td>3</td><td>7</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td>3</td><td>9</td><td>3</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td></td><td></td><td>1</td></tr> </table> </td> <td style="font-size: 2em; vertical-align: middle; text-align: center;">➔</td> <td style="text-align: center;"> <table border="0"> <tr><td>T</td><td>O</td><td>.</td><td>1/10</td></tr> <tr><td>5</td><td>8</td><td>.</td><td>4</td></tr> <tr><td>+2</td><td>4</td><td>.</td><td>3</td></tr> <tr><td colspan="4"><hr/></td></tr> <tr><td>8</td><td>2</td><td>.</td><td>7</td></tr> <tr><td colspan="4"><hr/></td></tr> <tr><td></td><td></td><td></td><td>1</td></tr> </table> </td> </tr> </table> <p>Children must always show place value headings.</p>	<table border="0"> <tr><td>H</td><td>T</td><td>O</td></tr> <tr><td>2</td><td>5</td><td>6</td></tr> <tr><td>+1</td><td>3</td><td>7</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td>3</td><td>9</td><td>3</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td></td><td></td><td>1</td></tr> </table>	H	T	O	2	5	6	+1	3	7	<hr/>			3	9	3	<hr/>					1	➔	<table border="0"> <tr><td>T</td><td>O</td><td>.</td><td>1/10</td></tr> <tr><td>5</td><td>8</td><td>.</td><td>4</td></tr> <tr><td>+2</td><td>4</td><td>.</td><td>3</td></tr> <tr><td colspan="4"><hr/></td></tr> <tr><td>8</td><td>2</td><td>.</td><td>7</td></tr> <tr><td colspan="4"><hr/></td></tr> <tr><td></td><td></td><td></td><td>1</td></tr> </table>	T	O	.	1/10	5	8	.	4	+2	4	.	3	<hr/>				8	2	.	7	<hr/>							1
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<p>4</p>	<p>Column method increasing in place value.</p>	<p>Place value counters and place value frames will still be available to support understanding of the concept.</p>	<p>Expanded method-using decimals.</p> 																																																					

There were 6000 books for sale at a book fair.
 3419 books were sold on the first day of the fair and
 2268 books were sold on the second day.
 How many books were left at the end of the second day?



To promote fluency number lines can be used for addition of decimals

Start by partitioning the numbers before moving on to clearly show the exchange below the addition.

$$\begin{array}{r} 20 + 5 \\ 40 + 8 \\ \hline 60 + 13 = 73 \end{array}$$

As the children move on, introduce decimals with the same number of decimal places and different. Money can be used here.

$$\begin{array}{r} 536 \\ + 85 \\ \hline 621 \\ 11 \end{array}$$

$$\begin{array}{r} 72.8 \\ + 54.6 \\ \hline 127.4 \end{array}$$

$$\begin{array}{r} \pounds 23.59 \\ + \pounds 7.55 \\ \hline \pounds 31.14 \end{array}$$

$$\begin{array}{r} 23.361 \\ 9.080 \\ 59.770 \\ + 1.300 \\ \hline 93.511 \\ 212 \end{array}$$

Yr
5/
6

Place value counters and place value frames will still be available to support understanding of the concept.

Where necessary do not be afraid to use the expanded method for initial explanation.
 Number lines promote fluency and are a clear assessment tool.

See Above
Remember
 Children should label place value columns to ensure accuracy and to allow the children to identify errors.

