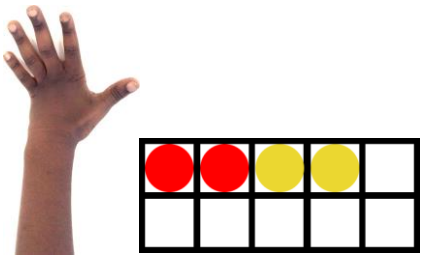
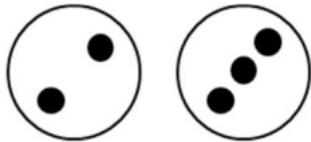








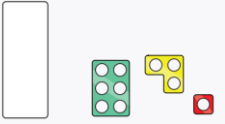
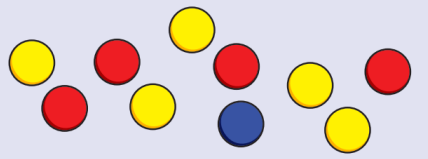
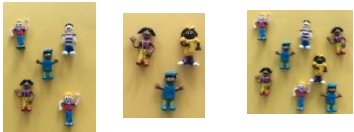
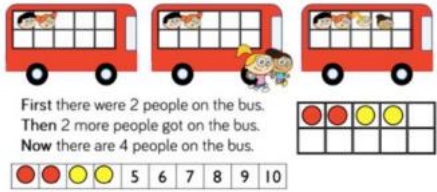
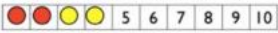
# Calculation Policy

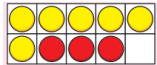
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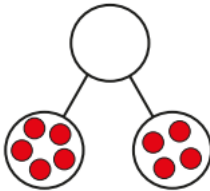
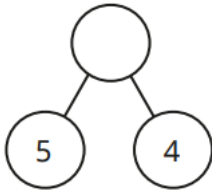

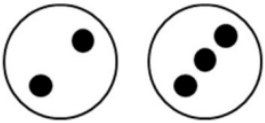
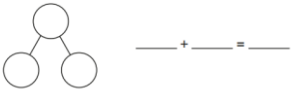
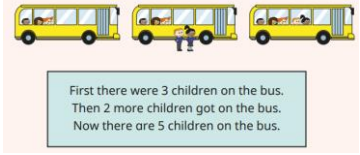

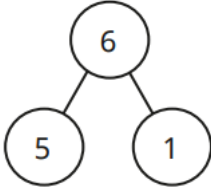

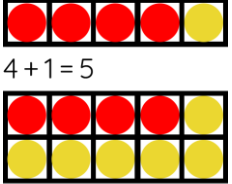
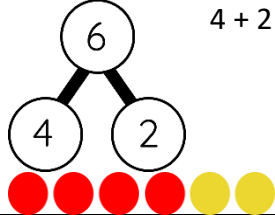
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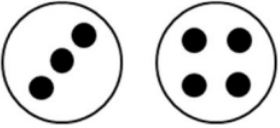
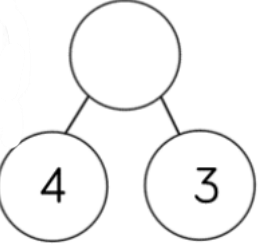


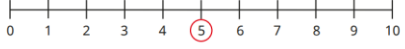
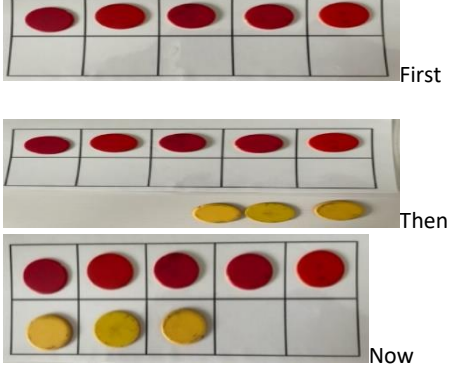



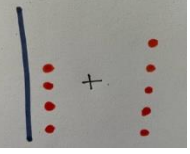
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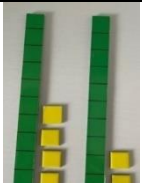

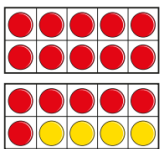

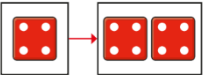

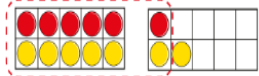
<b>EYFS:</b>			
<b>Vocabulary:</b>	first, then, now, add, plus, altogether, total, part, whole	<b>Manipulatives &amp; scaffolds:</b>	Fingers Five frames Ten frames Double sided counters Numicon Cubes Bead strings Part-whole model
<b>Small step:</b>	<b>Concrete:</b>	<b>Pictorial:</b>	<b>Abstract:</b>
Combining two groups	Children begin to combine 2 groups of objects to find how many there are altogether  		How many ___ can you see? How many ___ can you see? How many can you see altogether?
1 more	 There are 7 altogether. 1 more than 6 is 7. 7 is 1 more than 6.	 There are 7 (starfish). 1 more than 7 is 8. 8 is 1 more than 7.	There are ___ There are ___ altogether. ___ is 1 more than ___ 1 more than ___ is ___


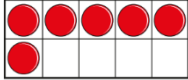

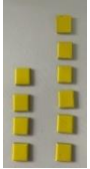
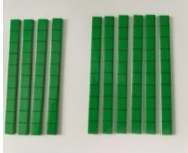
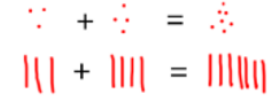

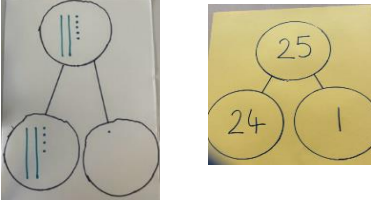
<p>Combine two groups</p>	 <p>There are 3 here and 4 there. There are 7 altogether. 3 and 4 make 7.</p>	 <p>There are 4 dots and 2 dots. There are 6 altogether. 4 and 2 make 6.</p>	<p>There are ___ here and ___ there. There are ___ altogether. ___ and ___ make ___</p>
<p>Bonds to 10 (2 parts)</p>	 <p>The whole is 10. 6 is a part and 4 is a part. 6 and 4 are a bond to 10. If 6 is a part then the other part must be 4.</p>	 <p>The whole is 10 If 6 is a part then the other part must be 4. 6 and 4 are a bond to 10.</p>	<p>The whole is ___ ___ is a part and ___ is a part ___ and ___ are a bond to 10 If ___ is a part, then the other part must be ___</p>
<p>Bonds to 10 (3 parts)</p>	 <p>Use 3 Numicon pieces to cover a 10 piece. The whole is 10. I can see that 10 is made up of 6 and 3 and 1.</p>	 <p>There are 10 counters, the whole is 10. I can see that 10 is made up of 5 and 4 and 1.</p>	<p>I can see that 10 is made up of ___ and ___ and ___.</p>
<p>Adding more</p>	<p>Use 'first, then, now' number stories to find the answer to the question "How many now?" by providing meaningful contexts</p> 	 <p>First there were 2 people on the bus. Then 2 more people got on the bus. Now there are 4 people on the bus.</p> 	<p>First there were ___ Then ___ more were added. Now there are ___ There are ___ altogether</p>

	<p>First there were 5 people. Then there were 3 more. Now there are 8.</p>		
<p>How many did I add?</p>	<p>Provide children with 'first, then, now' number stories where the 'then' part is missing: "There were 6 children on the bus, then we don't know how many more got on, but now there are 8 children on the bus.</p>  <p>Represent the starting number with yellow counters and then add red counters until they reach the total amount. The number of red counters represents the number that has been added.</p>		<p>First there were ____ Now there are ____ ____ were added I added ____</p>
<b>Y1</b>			
<b>Vocabulary:</b>	<p>add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double</p>	<b>Manipulatives &amp; scaffolds:</b>	<p>Ten frames Double sided counters Numicon Cubes Bead strings Part-whole model Bar model</p>
<b>Small step:</b>	<b>Concrete:</b>	<b>Pictorial:</b>	<b>Abstract:</b>

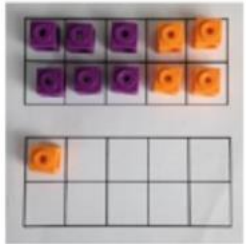
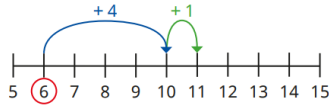

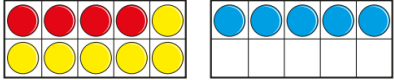
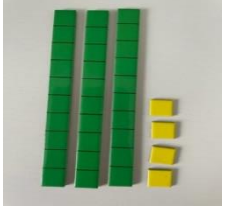
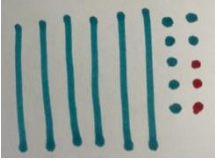
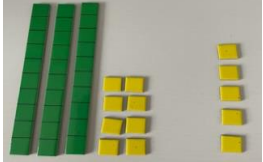
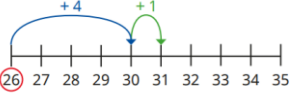
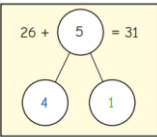
<p>Understand part and whole relationships</p>	<p>Here are some frogs.</p> <ul style="list-style-type: none"> <li>Can you see two groups of frogs?</li> <li>How many frogs are in each group?</li> <li>Complete the sentences.</li> </ul> <p>___ is a part. ___ is a part. The whole is ____</p> 	 <p>___ is a part ___ is a part The whole is ____</p>	 <p>___ is a part ___ is a part The whole is ____</p>
<p>Write number sentences</p>	 <p>Here are some counters. Group the counters by colour.</p> <p>___ red counters plus ___ yellow counters is equal to ___ counters.</p>	 <p><math>2 + 3 = 5</math></p>	 <p>___ + ___ = ___</p>
<p>Fact families – addition facts</p>		 <p>___ + ___ = 7      7 = ___ + ___ ___ + ___ = 7      7 = ___ + ___</p>	 <p><math>5 + 1 = 6</math> <math>1 + 5 = 6</math> <math>6 = 5 + 1</math> <math>6 = 1 + 5</math></p>
<p>Number bonds within 10</p>	 <p><math>3 + 2 = 5</math></p>	 <p><math>4 + 1 = 5</math> <math>4 + 6 = 10</math></p>	 <p><math>4 + 2 = 6</math></p>

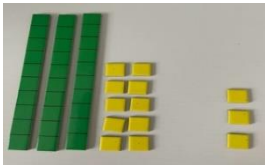
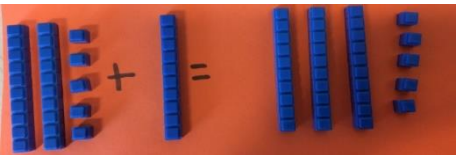
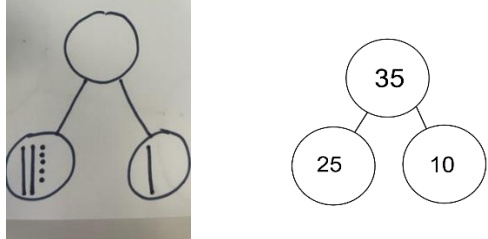
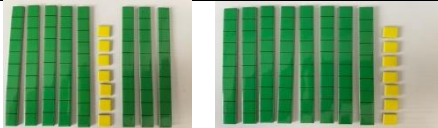
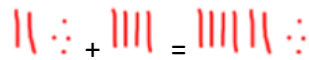
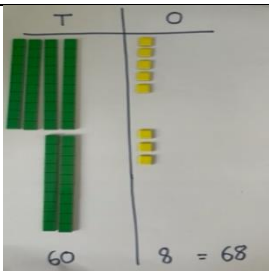
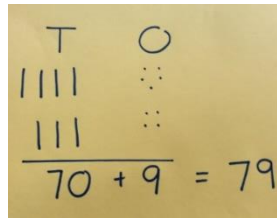
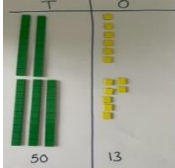
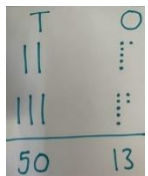
<p>Add together</p>	 <p><math>4 + 3 = 7</math></p>	 <p><math>3 + 4 = 7</math></p>	 <p><math>4 + 3 = 7</math></p>
<p>Add more</p>	 <p>Put 2 counters in a tens frame. Now add 8 more counters. How many counters are there altogether?</p>	<p><math>4 + 3 =</math></p> 	 <p><math>5 + \_\_\_ = \_\_\_</math></p>
<p>Add by counting on within 20</p>	 <p>First Then Now</p> <p>First there were 5 counters Then I added 3 Now there are 8 counters</p>	<p>Ann has 13 marbles. She gets 5 more marbles. How many marbles does Ann have now?</p> 	 <p><math>9 + 6 = \_\_\_</math></p>
<p>Adding ones using number bonds</p>		 <p><math>14 + 2 =</math></p>	<p><math>12 + 4 =</math></p>

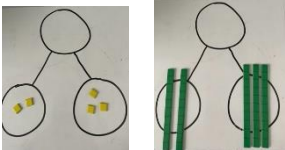
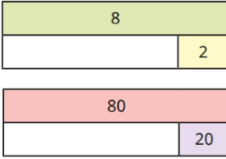
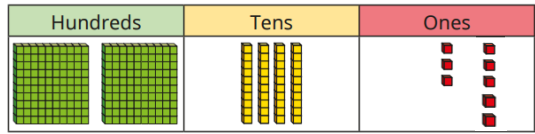
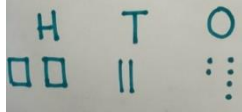
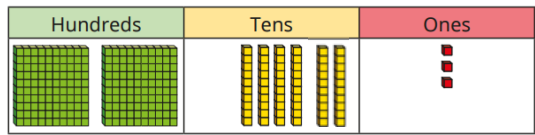
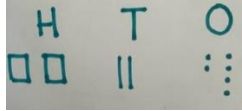
	 $14 + 2 =$		
Find and make number bonds to 20	 $16 + 4 = 20$	 $4 + 16 = 20$	$20 = \_ + \_$ $20 = \_ + \_$
Doubles	 Double 7 is $\_$	 Double 4 is $\_$	Double $\_$ is $\_$
Near doubles	 $6 + 7 =$ $6 + 6 + 1 =$ Double $6 + 1 =$	 $6 + 7 =$ double $\_$ plus $\_$	Use doubles to work out the near doubles: $4 + 5 =$ $6 + 7 =$ $8 + 7 =$
<b>Y2</b>			
<b>Vocabulary:</b>	add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, commutative	<b>Manipulatives &amp; scaffolds:</b>	Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts

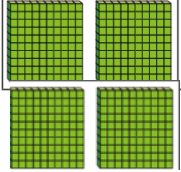


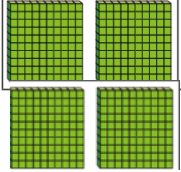


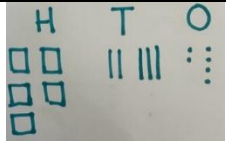
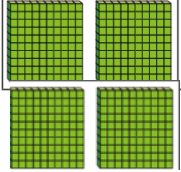


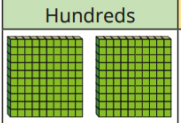


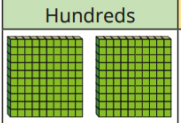


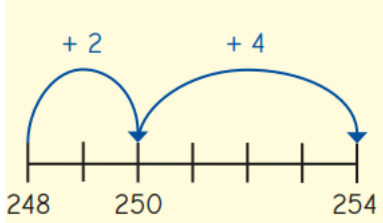
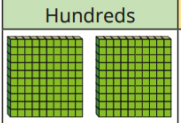


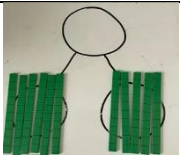
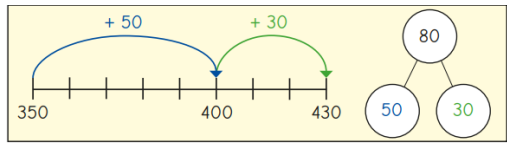
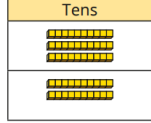
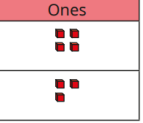
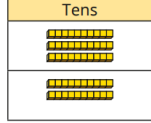
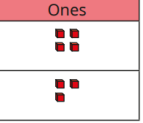
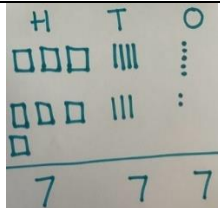
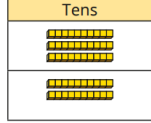
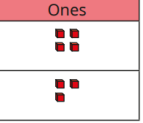
Small step:	Concrete:	Pictorial:	Abstract:
Bonds to 10	 $\_ + \_ = 10$	 $5 + \_ = 10$	$\_ + \_ = 10$ $10 = \_ + \_$
Fact families – addition bonds within 20	 $\_ + \_ = \_$ $\_ + \_ = \_$ $\_ = \_ + \_$ $\_ = \_ + \_$		$\_ + \_ = \_$ $\_ + \_ = \_$ $\_ = \_ + \_$ $\_ = \_ + \_$
Bonds to 100 (tens)	  $4 + 6 = 10$ $40 + 60 = 100$	 $3 + 4 = 7$ $30 + 40 = 70$	$\_ + \_ = 100$ $100 = \_ + \_$
Add ones	 $24 + 1 = 25$		$46 + 1 =$ $46 + 2 =$ $46 + 3 =$



<p>Add by making 10</p>	 <p><math>6 + 5 = 10 + 1</math>  <math>= 11</math></p>	 <p><math>6 + 5 = 10 + 1</math>  <math>= 11</math></p>	<p><math>7 + 4 = 11</math></p> <p><i>If I have seven, how many more do I need to make ten?</i></p> <p><i>How many more do I need to add?</i></p>
<p>Add three 1-digit numbers</p>	 <p><math>7 + 2 + 3 =</math></p>	 <p><math>4 + 6 + 6 =</math></p>	<p><math>7 + 5 + 3 =</math></p> <p><math>7 + 5 + 3 = 15</math></p> <p><i>10</i></p>
<p>Add to the next 10</p>	 <p>The Base 10 shows 34          How many tens are there in 34?          What is the multiple of 10 after 34?          How many ones are there in 34?          How many more ones do I need to add to get to the next multiple of 10?  <math>34 + \underline{\quad} = \underline{\quad}</math></p>	 <p><math>67 + \underline{\quad} = 70</math></p>	<p><math>45 + \underline{\quad} = 50</math>  <math>81 + \underline{\quad} = 90</math>  <math>32 + \underline{\quad} = 40</math></p>
<p>Add across a ten</p>		 	<p><math>67 + 5 =</math></p>

	 <p><math>38 + 5 = 40 + 3</math></p>		
10 more	 <p><math>25 + 10 = 35</math></p>		$25 + 10 = 35$ $10 + 25 = 35$  $35 = 25 + 10$ $35 = 10 + 25$
Add 10s	 <p><math>57 + 30 = 87</math></p>	 <p><math>24 + 40 = 64</math></p>	$23 + 10$ $54 + 40$
Add two 2-digit numbers (not across a ten)	 <p><math>60 + 8 = 68</math></p>	<p><math>45 + 34 =</math></p> 	$52 + 14$ $23 + 31$
Add two 2-digit numbers (across a ten)	 <p><math>26 + 37 =</math> <math>20 + 30 = 50</math></p>	<p><math>26 + 37 =</math></p>  <p><math>20 + 30 = 50</math></p>	$26 + 37$ $46 + 27 =$ $17 + 33 =$

	$6 + 7 = 13$ $50 + 13 = 63$	$6 + 7 = 13$ $50 + 13 = 63$	
<b>Y3</b>			
<b>Vocabulary:</b>	add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, exchange, regroup, hundreds	<b>Manipulatives &amp; scaffolds:</b>	Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters
<b>Small step:</b>	<b>Concrete:</b>	<b>Pictorial:</b>	<b>Abstract:</b>
Apply number bonds	 $2 + 3 = 5$ $20 + 30 = 50$	 $\_\_ + 2 = 8$ $\_\_ + 20 = 80$	$2 + \_\_ = 5$ $20 + \_\_ = 50$
Add ones	 $243 + 5 =$	 $222 + 4 =$	$354 + 4$ $215 + 3$ $461 + 8$
Add tens	 $243 + 20 =$	 $226 + 30 =$	$546 + 30$ $743 + 50$ $229 + 60$

<p>Add hundreds</p>	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="background-color: #d9ead3;">Hundreds</th> <th style="background-color: #fff2cc;">Tens</th> <th style="background-color: #f4cccc;">Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><math>243 + 200 =</math></p>	Hundreds	Tens	Ones				 <p><math>256 + 300 =</math></p>	<p><math>378 + 400</math> <math>579 + 300</math> <math>285 + 600</math></p>																														
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<p>Add 10s across a hundred</p>	 <p><math>60 + 50 =</math> <math>60 + 40 = 100</math> <math>100 + 10 = 110</math></p>	 <p><math>350 + 80 =</math> <math>350 + 50 = 400 + 30 = 430</math></p>	<p><math>695 + 80</math> <math>476 + 60</math></p>																																				
<p>Add two numbers (no exchange)</p>	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="background-color: #fff2cc;">Tens</th> <th style="background-color: #f4cccc;">Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table> <p><math>+</math></p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>4</td> </tr> <tr> <td><math>+</math> 2</td> <td>3</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black;"> </td> </tr> </tbody> </table>	Tens	Ones			T	O	3	4	$+$ 2	3			 <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td><math>+</math> 4</td> <td>3</td> <td>2</td> </tr> <tr> <td colspan="3" style="border-top: 1px solid black;"> </td> </tr> </tbody> </table>	H	T	O	3	4	5	$+$ 4	3	2				<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>2</td> <td>4</td> </tr> <tr> <td><math>+</math> 3</td> <td>7</td> <td>3</td> </tr> <tr> <td colspan="3" style="border-top: 1px solid black;"> </td> </tr> </tbody> </table>	H	T	O	5	2	4	$+$ 3	7	3			
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<p>Add 2-digit and 3-digit numbers</p>		$\begin{array}{r} 317 \\ + 54 \\ \hline 363 \\ 1 \end{array}$	<p>537 + 82 =</p>																		
<p><b>Y4</b></p>																					
<p><b>Vocabulary:</b></p>	<p>add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, exchange, regroup, hundreds, thousands</p>	<p><b>Manipulatives &amp; scaffolds:</b></p>	<p>Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters</p>																		

Small step:	Concrete:	Pictorial:	Abstract:
Add up to two 4-digit numbers – no exchange	<p>Concrete representation of adding 1000 + 1000. Base ten blocks (1000 rods) are used. A place value chart shows 2 thousands in the thousands column.</p>	<p>Pictorial representation of adding 1000 + 1000. Circles represent base ten blocks. A place value chart shows 2 thousands in the thousands column.</p>	<p>Abstract representation of adding 1000 + 1000. A place value chart shows 2 thousands in the thousands column.</p>
Add two 4-digit numbers – one exchange	<p>Concrete representation of adding 1432 + 1123. Base ten blocks are used, showing one exchange of ten ones for one ten. A place value chart shows the sum 2555.</p>	<p>Pictorial representation of adding 1432 + 1123. Circles represent base ten blocks, showing one exchange. A place value chart shows the sum 2555.</p>	<p>Abstract representation of adding 1432 + 1123. A place value chart shows the sum 2555.</p>
Add two 4-digit numbers – more than one exchange	<p>Concrete representation of adding 1634 + 1517. Base ten blocks are used, showing multiple exchanges. A place value chart shows the sum 3151.</p>	<p>Pictorial representation of adding 1634 + 1517. Circles represent base ten blocks, showing multiple exchanges. A place value chart shows the sum 3151.</p>	<p>Abstract representation of adding 1634 + 1517. A place value chart shows the sum 3151.</p>
<b>Y5</b>			
<b>Vocabulary:</b>	add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes, double, ones, tens, partition, bonds, exchange, regroup, hundreds, thousands, decimals, tenths, hundredths, thousandths, decimal point	<b>Manipulatives &amp; scaffolds:</b>	Ten frames Double sided counters Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters

Small step:	Concrete:	Pictorial:	Abstract:
Add whole numbers with more than four digits			
Add decimals across one	<p><math>0.7 + 0.5</math></p>	<p><math>0.45 + 0.67</math></p>	<p><math>0.74 + 0.42</math></p>
Add decimals with the same number of decimal places			
Add decimals with a different number of decimal places			
<b>Y6</b>			
<b>Vocabulary:</b>	add, plus, altogether, total, part, whole, 2-digit number, sum, addition, more, and, makes,	<b>Manipulatives &amp; scaffolds:</b>	Ten frames Double sided counters

	double, ones, tens, partition, bonds, exchange, regroup, hundreds, thousands, decimals, tenths, hundredths, thousandths, decimal point, integer		Numicon Cubes Base 10/Dienes Part-whole model Bar model Number line Place value charts Place value counters																																																										
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