



Calculation Policy

Addition – Year 1

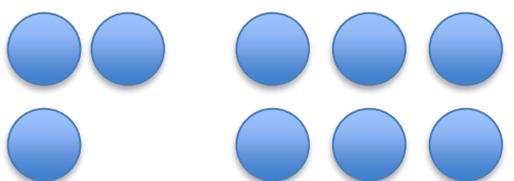
Focus: Adding with 1 digit and 2 digit numbers to 20, including 0.

In year 1 the children will build on their knowledge of numbers to 20 from the Foundation Stage. They will begin by using simple strategies to add two group of objects together and move onto recording their number sentences orally and written.

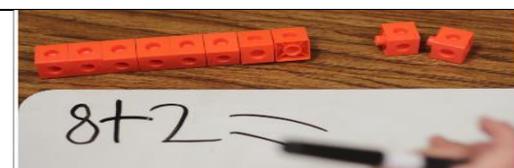
Before moving onto addition children need to be able to:

Form numbers 0 – 10 (then to 20)

Say numbers in order (at least to 10)



Children begin to add ones together using physical objects e.g. toy figures, straws, counters, and Numicon shapes. ^[SEP]They count each object to find how many altogether. Teacher models the language e.g. '3 counters add 6 counters equals 9 counters altogether'. ^[SEP]They begin to record by drawing pictures/marks.



The teacher models what the adding of two groups looks like in a number sentence. ^[SEP]The children begin to copy these number sentences on to whiteboards whilst still using objects to add.

2	+	3	=	5
6	+	2	=	8

The children become more independent and start to write number sentences into their maths books (squared maths paper) ensuring one digit in each box. Still using objects on tables to support them.

Note: Leave a line after each number sentence for children to edit if needed.

6	+	5	=	1	1
9	+	4	=	1	3

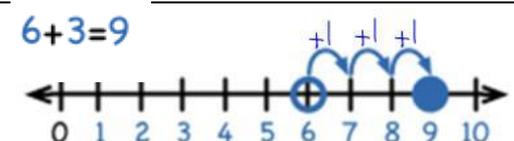
Children begin to add numbers that cross 10 using the same strategies. Objects and pictorial drawings to be used to support.

Introduce language of tens and ones. Continue to use objects e.g. Numicon, counters.

1	0	+	6	=	1	6
1	2	+	3	=	1	5

Children start to add a 1-digit number to a 2-digit number within 20. ^[SEP]Objects and pictorial drawings are still used to help the addition process. Begin to bridge 20.

Children should have secure knowledge of number bonds to 10.



Children are shown how to add using a number line. They say and repeat the jumps to begin with before moving on to drawing the jumps themselves. ^[SEP]Note: Each jump is one.

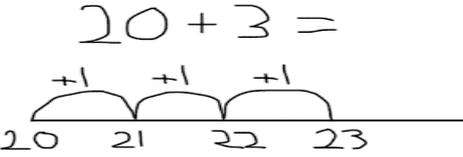
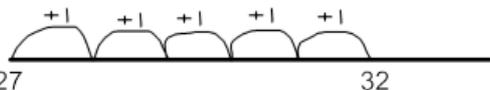
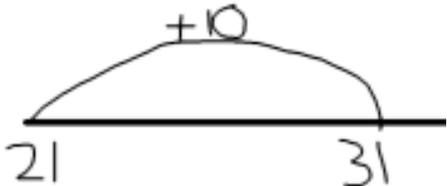
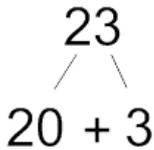
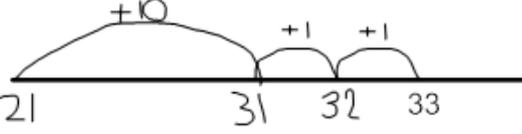
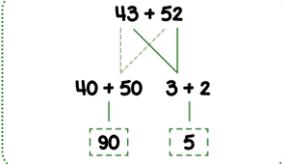
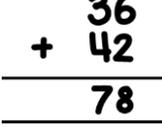
Key Vocabulary

Add, more, plus, make, altogether, equals, most, count on, number line, tens, ones, addition, number sentence

Addition – Year 2

Focus: Adding two 2-digit numbers

In year 2 children will move on to using an open number line to add 1 and 2 digit numbers. They will learn how to partition 2 digit numbers. At the end of the year they will look at the column method and **should confidently recall number bonds to 20**.

 <p>$20 + 3 =$</p> <p>20 21 22 23</p>	<p>The children will move on to adding using a blank number line to add a 1-digit number to a rounded 2-digit number e.g. $20 + 3 = 23$. The number sentence is also written in their books.</p>
 <p>$27 + 5 = 32$</p> <p>27 32</p>	<p>When using a blank number line securely, children move on to bridge 10 whilst still adding ones e.g. $27 + 5 =$</p>
 <p>$21 + 10 = 31$</p> <p>21 31</p>	<p>Once the children can confidently add a 1-digit number to a 2-digit number they can move on to adding two 2-digit numbers. To make it simpler for them they should start by adding tens e.g. $21 + 10$</p> <p>Extend by adding multiple tens e.g. $21 + 20$</p>
 <p>23</p> <p>20 + 3</p>	<p>Children will build on their number knowledge by partitioning 2 digit numbers into tens and ones. ^[SEP] The children must be confident in their understanding of place value before moving on.</p>
 <p>$21 + 12 = 33$</p> <p>21 31 32 33</p>	<p>Adding two 2-digit numbers using an open number line using their prior knowledge of adding tens and units. ^[SEP] The children only need to partition the smaller number to add.</p>
 <p>$43 + 52$</p> <p>$40 + 50$ $3 + 2$</p> <p>90 5</p>	<p>They could also partition two 2-digit numbers. Adding the ones, then the tens. Writing the number sentences in books.</p>
 <p>36</p> <p>$+ 42$</p> <hr/> <p>78</p>	<p>When children have all of these methods secure, they can begin to look at the column method for addition. Ensuring that the numbers are lined up correctly and with the place value above. No regrouping at this stage.</p>
<p>Key Vocabulary</p> <p>Add, more, plus, and, make, altogether, total, equal to, equals, the same as, most, count on, number line, number sentence, tens, ones, partition, addition, hundreds</p>	

Addition – Year 3

Focus: Adding with numbers up to 3 digits

In year 3 we will move to the traditional column method and to support this, children will first apply their partitioning skills and the expanded column method. Also developing mental addition skills.

	<p>Recap adding two two-digit numbers (bridging through tens boundary) Using a blank number line</p>						
	<p>Recap adding two-digit numbers using partitioning. $48 + 36 = 40 + 30 + 8 + 6$ (partition the numbers) $8 + 6 = 14$ (add the ones) $40 + 30 = 70$ (add the tens) $70 + 14 = 84$ (add the 2 totals together)</p>						
	<p>Once confident with these methods (and place value up to hundreds), introduce 3 digit numbers. Firstly adding the hundreds, then the 10s, finally the ones. $234 + 135 =$</p>						
	<p>Another method for mental addition is the jigsaw method to find the missing piece to 100. <i>If I have 72, how many more do I need to make 100?</i> <i>The ones column need to add up to 10, the tens column need to add up to 9.</i></p>						
	<p>Children can use the expanded column method for addition.</p> <ul style="list-style-type: none"> Add the hundreds first. Then add the tens Finally add the ones Then add them together 						
<p>$116 + 343 =$</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td style="text-align: right;">H T O</td></tr> <tr><td style="text-align: right;">343</td></tr> <tr><td style="text-align: right;">+ 116</td></tr> <tr><td style="text-align: right;">-----</td></tr> <tr><td style="text-align: right;">459</td></tr> </table>	H T O	343	+ 116	-----	459	<p>Now children are ready to move on to the traditional column methods. Introduce this initially with numbers that do not bridge any boundaries (regroup). Ensure they start adding at the ones. It is important children remember that it is three hundred add one hundred, NOT 3 + 1! Have children label the columns using place value to remind them (H, T, O). That is hundreds, tens, ones</p>	
H T O							
343							
+ 116							

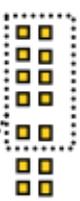
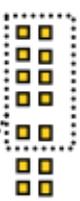
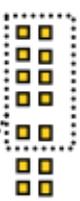
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<table style="margin-left: auto; margin-right: auto;"> <tr><td style="text-align: right;">T O</td></tr> <tr><td style="text-align: right;">76</td></tr> <tr><td style="text-align: right;">+ 48</td></tr> <tr><td style="text-align: right;">-----</td></tr> <tr><td style="text-align: right;">124</td></tr> <tr><td style="text-align: right;"> 1</td></tr> </table>	T O	76	+ 48	-----	124	1	<p>Once the method is secure children are now ready to be introduced to 'regrouping' (when numbers add up over 9). Make sure children add the ones first and 'regroup' numbers under the bottom line. (With 2 or 3 digit numbers). $8+6 = 14$, so the 4 goes in the answer and 1 goes underneath</p>
T O							
76							
+ 48							

124							
1							
<p>Key Vocabulary Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, tens, ones, partition, addition, column, tens boundary, <i>hundreds boundary, increase, regroup, expanded,</i></p>							

Addition – Year 4

Focus: Adding with numbers up to 4 digits

In year 4 children will consolidate their use of the traditional column method and will be able to use it confidently to add numbers up to 4 digits. This could include regrouping units, tens and hundreds, and over multiple columns.

<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center;">H</th> <th style="width: 33%; text-align: center;">T</th> <th style="width: 33%; text-align: center;">O</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; border: 1px solid red; padding: 5px;">8</td> <td style="text-align: center; border: 1px solid red; padding: 5px;">1</td> <td style="text-align: center; border: 1px solid red; padding: 5px;">7</td> </tr> <tr> <td style="text-align: center; border: 1px solid red; padding: 5px;">1</td> <td style="text-align: center; border: 1px solid red; padding: 5px;">8</td> <td style="text-align: center; border: 1px solid red; padding: 5px;">3</td> </tr> <tr> <td style="text-align: center;">9</td> <td style="text-align: center;">9</td> <td style="text-align: center;">10</td> </tr> </tbody> </table>	H	T	O	8	1	7	1	8	3	9	9	10	<p>Developing on the previous jigsaw mental method to 100, we will now be finding the missing piece to 1000.</p> <p><i>If I have 817, how many more do I need to make 1000?</i></p> <p><i>The ones column need to add up to 10, the tens column need to add up to 9, the hundreds column need to add up to 9.</i></p> <p>$817 + ? = 1000$ Answer = 183</p>														
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1	8	3																									
9	9	10																									
<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: right; padding-right: 10px;">686</td> <td style="text-align: right; padding-right: 10px;">+ 549</td> <td></td> </tr> <tr> <td colspan="3" style="border-top: 1px solid black; padding-top: 5px;"></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">1235</td> <td></td> <td></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">1 1</td> <td></td> <td></td> </tr> </tbody> </table>	686	+ 549					1235			1 1			<p>Children should already be familiar with the column method from year 3 but it is very important to go over the method again ensuring children understand why they start with the ones, and then move onto regrouping numbers etc.</p> <p>Ensure children have a good understanding of the regrouping process.</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 20px;"> <table style="border-collapse: collapse;"> <tbody> <tr> <td style="text-align: right; padding-right: 10px;">48</td> <td></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">+ 36</td> <td></td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; padding-top: 5px;"></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">84</td> <td></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">1</td> <td></td> </tr> </tbody> </table> </div> <div style="text-align: center;"> <table style="border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">T</th> <th style="width: 50%; text-align: center;">U</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; border-right: 1px solid black; padding: 10px;">  </td> <td style="text-align: center; padding: 10px;">  </td> </tr> </tbody> </table> </div> <div style="margin-left: 20px;"> <p>Each column is only allowed up to 9, if more they have to regroup to the next column</p> </div> </div> <p>Please Note:</p> <ol style="list-style-type: none"> 1) The ones must be added first! 2) 'Regrouped' numbers underneath the bottom line to be added on 3) Reinforce the place value! It is 8 tens add 4 tens!! (Not 8 add 4) 4) Use a range of measurements when adding, e.g. pounds and pence, kg, ml 	48		+ 36				84		1		T	U		
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<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: right; padding-right: 10px;">£ 2.48</td> <td></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">+ £ 3.75</td> <td></td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; padding-top: 5px;"></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">£ 6.23</td> <td></td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">1 1</td> <td></td> </tr> </tbody> </table>	£ 2.48		+ £ 3.75				£ 6.23		1 1		<p>When these methods are secure, introduce adding decimal place using money (only if children have a good understanding of 1 or 2 decimal place value). Ensure decimal point is lined up correctly.</p>																
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<p>Key Vocabulary</p> <p>Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, tens, ones, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, regroup, column method, expanded, <i>thousands, hundreds, digits, inverse.</i></p>																											

Addition – Year 5

Focus: Adding with more than 4 digits

In year 5 children will now use the column method to add decimal numbers in the context of money and measures. It is important that children have place value skills beyond 4 digits here and fully understand what a decimal number represents. It is also important that children have a secure understanding of the regrouping method.

	<p>Developing on the previous jigsaw mental method to 1000, we will now be finding the missing piece to a tenth (decimal place). <i>If I have 4.7, how many more do I need to make 10?</i> <i>The tenths column need to add up to 1, the ones column need to add up to 9.</i></p> <p>$4.7 + ? = 10$ Answer = 5.7</p>
	<p>Recap the column addition with 5 plus digits, including regrouping (see year 4 addition methods).</p>
<p>$0.4 + 0.3 = 0.7$</p> <p>$0.26 + 0.53 = 0.79$</p>	<p>Children should also be able to add decimal numbers (tenths and hundredths).</p> <p>Children should know to start adding the smallest value first.</p>
	<p>With a secure understanding of decimal place, children should use the column method to start adding 2 decimal places with larger numbers (money is a good way to introduce this). Children must: Understand the importance of the decimal point Line the decimal point up correctly</p>
	<p>Children need to start using the column method to add more than two values, still considering place value very carefully.</p> <p>Please Note: ^[SEP:1] It is important that children say 6 tenths add 7 tenths so they understand that they are adding part of a number not a whole number. ^[SEP:2] Empty places should be filled with a zero to show the value of that place.</p>
<p>Key Vocabulary Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, ones, tens, hundreds, thousands, ten thousands, millions, partition, addition, column method, tens boundary, hundreds boundary, increase, vertical, regroup, expanded, thousands, hundreds, digits, inverse, <i>decimal place</i>, <i>decimal point</i>, <i>tenths</i>, <i>hundredths</i>, <i>thousandths</i>.</p>	

Addition – Year 6

Focus: Adding several numbers with an increasing level of complexity

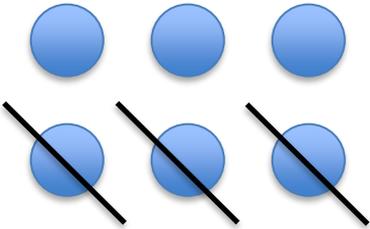
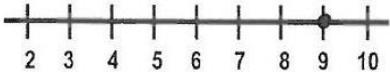
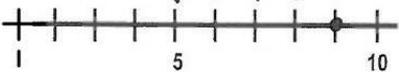
In year 6 children need to use all the previous adding skills developed to add several numbers with a variety of different decimal places. Many of these problems will be in the context of money or measures.

	<p>Children need to use their knowledge of the decimal point to line up their amounts correctly in the column. Zeros should be added to support place value, showing that there is no value to add.</p>
	<p>Children should also continue to add numbers with 4 digits or more.</p>
<p>$0.44 + 0.3 = 0.74$</p> <p>$0.374 + 0.324 = 0.698$</p> <p>$0.256 + 0.3 = 0.556$</p>	<p>Children should also be able to add decimal numbers (tenths, hundredths and thousandths).</p> <p>Children should know to start adding the smallest value first.</p>
<p>Key Vocabulary Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, ones, tens, hundreds, thousands, ten thousands, millions, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, carry, expanded, compact, thousands, hundreds, digits, inverse, decimal place, decimal point, tenths, hundredths, thousandths, <i>integer</i></p>	

Subtraction – Year 1

Focus: Subtracting with 1 digit and 2 digit numbers to 20, including 0.

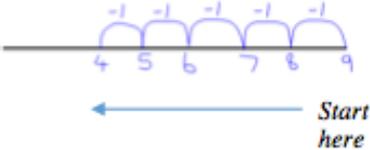
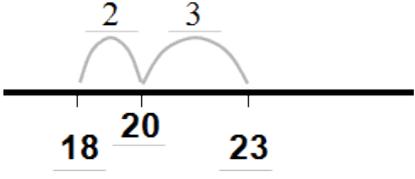
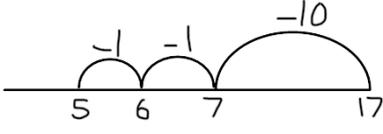
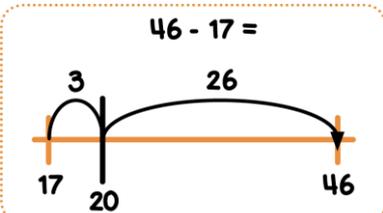
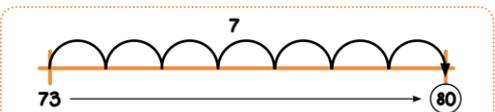
In year 1 the children will build on their knowledge of numbers to 20 from the Foundation Stage. They will begin by using simple strategies to subtract from a group of objects and move onto recording their number sentences orally and written.

	<p>Children begin to subtract units from a large group using physical objects e.g. toy figures, straws, counters, Numicon shapes, etc.</p> <p>They count each object to find how many left.</p> <p>Teacher models the language e.g. '6 straws take away 3 straws equals 3 cups'. They begin to record by drawing pictures/marks.</p>															
 <p>$6 - 2 = 4$</p>	<p>The teacher models what the subtraction looks like in a number sentence. The children begin to copy these number sentences onto whiteboards whilst still using objects to help them subtract. Children understand the symbol for subtraction.</p>															
<table border="1" data-bbox="165 952 496 1167"> <tr> <td>8</td> <td>-</td> <td>6</td> <td>=</td> <td>2</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>4</td> <td>-</td> <td>1</td> <td>=</td> <td>3</td> </tr> </table>	8	-	6	=	2						4	-	1	=	3	<p>The children become more independent and start to write number sentences into their math's books (squared math's paper) ensuring one digit in each box.</p> <p><i>Note: Leave a line after each number sentence for children to polish if needed.</i></p>
8	-	6	=	2												
4	-	1	=	3												
<table border="1" data-bbox="165 1169 496 1357"> <tr> <td>10</td> <td>-</td> <td>3</td> <td>=</td> <td>7</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>12</td> <td>-</td> <td>5</td> <td>=</td> <td>7</td> </tr> </table>	10	-	3	=	7						12	-	5	=	7	<p>Children begin to subtract numbers that bridge 10 using the same strategies. A 1- digit number is subtracted from a 2-digit number. Introduce language of tens and ones. Continue to use objects and pictorial drawings e.g. Numicon.</p>
10	-	3	=	7												
12	-	5	=	7												
<p>$9 - 4 = 5$ -1 -1 -1 -1</p> 	<p>Children are now shown how to subtract using a tracked number line. They record their findings by drawing the jumps of ones themselves.</p> <p><i>Note: Biggest number is circled and children jump back along the number line to find the answer. Jumps of one.</i></p>															
<p>$9 - 4 = 5$ -1 -1 -1 -1</p> 	<p>Partial number lines are then used as a transition to blank number lines.</p>															
<p>Key Vocabulary Take away, less, minus, subtract, how many more, how many fewer/less than, most, least, how many left, partition, tens, ones, <i>digit</i></p>																

Subtraction - Year 2

Focus: Subtracting with two 2 digit numbers

Children will begin to count backwards using a blank numberline to subtract. They will use these methods both written and mentally.

<p>$9 - 5 = 4$</p> 	<p>Once the children are confident using a tracked and partial number line, they will be shown how to use a blank number line. They will start by subtracting ones in (backward) jumps of one.</p>
	<p>Children now bridge (cross) 10 when subtracting from a two digit number under 100. Start at the larger number and count backwards.</p> <p>e.g. $23 - 5 =$ count back to 20 (-3), then subtract the remaining amount ($5-3=2$), $20-2=18$</p>
<p>12</p> <p>10 2</p>	<p>Partitioning is taught (or recapped) so that children can start to subtract two 2 digit numbers.</p>
<p>$17 - 12 =$</p> 	<p>Children are now ready to subtract tens and ones on a blank number line using partitioning skills. <i>Note: Jump large tens and small ones. Biggest number goes at the end of the number line.</i></p> <p><i>Only the smaller number needs to be partitioned.</i></p>
<p>$46 - 17 =$</p> 	<p>Continue to increase difficulty by subtracting larger numbers.</p> <p><i>Note: Work with numbers up to 100.</i></p>
<p>$80 - 73 =$</p> 	<p>Finding the gap! Counting backwards not always needed, change mindset that counting on or backwards can find the difference.</p> <p>$80 - 73 =$ Count up from 73 up to 80 to find the answer.</p>
$\begin{array}{r} 96 \\ - 42 \\ \hline 54 \end{array}$	<p>When children have all of these methods secure, they can begin to look at the column method for subtraction. Ensuring that the numbers are lined up correctly and with the place value above. No regrouping at this stage.</p>
<p>Key Vocabulary</p> <p>Equal to, take away, less, minus, subtract, difference between, how many more, how many fewer/less than, most, least, count back, how many left, count on, partition, tens, ones, <i>digit</i></p>	

Subtraction – Year 3

Focus: Subtracting with 2 and 3 digit numbers

Children will consolidate their knowledge of counting back and counting on using a blank number line to subtract. They will use these methods both written and mentally. Once children become fully confident they will be ready to move on to the column method for subtraction.

	<p>Children should be able to use the jigsaw method to solve subtraction problems mentally up to 100. <i>Secure number bonds to 10 should support this.</i> $100 - 24 =$ Put 24 into the correct columns (ones and hundreds) The ones column need to total 10, therefore 6 is needed. The hundreds column needs to total 9, therefore 7 is needed.</p>
	<p>Children will continue to subtract on a blank number line using efficient jumps and now apply these to 3 digit number problems. $340 - 127 =$ (partition the 127)</p>
	<p>Counting on will also be used for problems greater than 100 using efficient jumps, the use of 100 square can support children's understanding of this method.</p>
<p style="text-align: center;">HTO</p> $\begin{array}{r} 986 \\ - 42 \\ \hline 944 \end{array}$	<p>Children should recap column subtraction, ensuring the numbers are lined up in the correct place value columns. This time using 3 digit numbers. No regrouping</p>
<p style="text-align: center;">T O</p> $\begin{array}{r} 6 \cancel{1} 6 \\ - 48 \\ \hline 28 \end{array}$	<p>Subtraction column method with regrouping should be introduced once basic column method is secure, but with the use of practical subtraction. Base 10 or place value counters are vital to demonstrate this. Here the pupil is faced with questions where they can not simply 'go down the columns' as the ones digit in the bottom number is larger than the ones digit in the top number. The new skill for the child to master here is to reduce the tens digit on the top number by 1, by crossing through the original tens digit and writing a new tens digit reduced by 1, and then writing a mini 1 next to the ones digit, thereby adding 10 to the digit in the ones column (see crossed out ten and regrouped 10 red circled ones). This is called regrouping and needs to shown on the top line.</p>

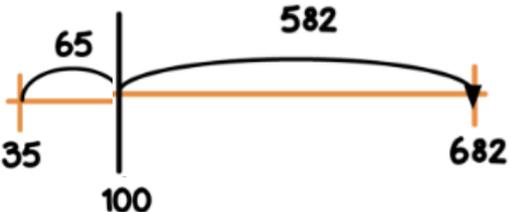
Key Vocabulary

Equal to, take, take away, less, minus, subtract, leaves, distance between, difference between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is_?, count on, strategy, partition, tens, ones, *regroup, decrease, hundreds, value, digit*

Subtraction – Year 4

Focus: Subtracting with numbers up to 4 digits

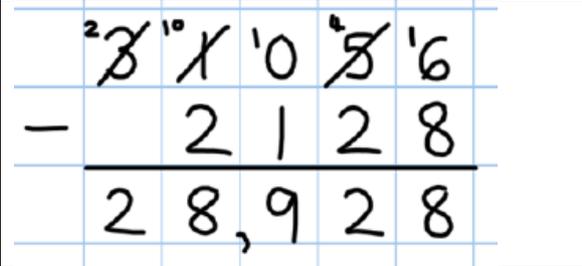
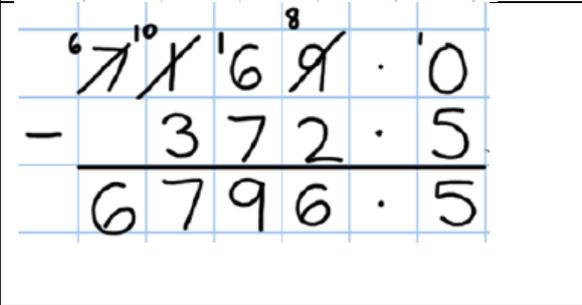
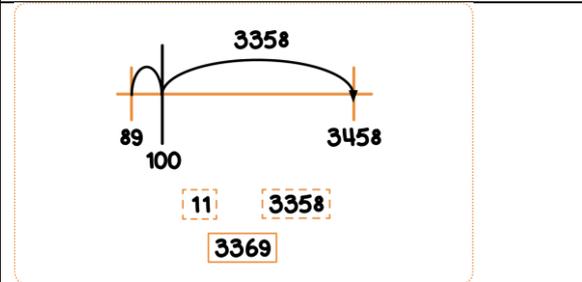
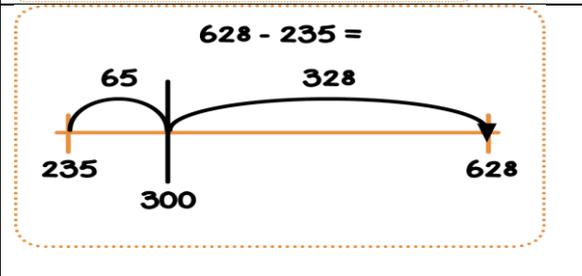
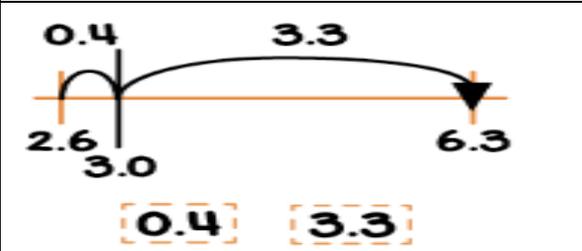
Children will consolidate their knowledge of the column method for subtraction with 4 digit numbers including those where regrouping is required.

<div style="text-align: center;"> <table border="1"> <thead> <tr> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>1</td> <td>7</td> </tr> <tr> <td><u>1</u></td> <td><u>8</u></td> <td><u>3</u></td> </tr> </tbody> </table> <p>Total: 9 9 10</p> </div>	H	T	O	8	1	7	<u>1</u>	<u>8</u>	<u>3</u>	<p>Children should be able to use the jigsaw method to solve subtraction problems mentally up to 1000. Secure number bonds to 10 will support this.</p> $1000 - 817 = 183$
H	T	O								
8	1	7								
<u>1</u>	<u>8</u>	<u>3</u>								
	<p>Recap the understanding of regrouping using practical resources such as base 10 and place value counters. Have children physically regroup (using counters) from column to column.</p>									
<div style="text-align: center;"> <p>ThHTO</p> $\begin{array}{r} \overset{4}{\cancel{5}}\overset{1}{\cancel{6}}\overset{7}{\cancel{6}} \\ - \quad \quad 749 \\ \hline 4937 \end{array}$ $\begin{array}{r} \overset{4}{\cancel{5}}\overset{1}{\cancel{6}}\overset{7}{\cancel{6}} \\ - \quad \quad 4749 \\ \hline 937 \end{array}$ </div>	<p>Children will come across problems where regrouping will need to take place several times to complete the problem.</p>									
	<p>Children should be able to mentally subtract a 2 digit number from a 3 digit number.</p> $682 - 35 =$ <p>Use jigsaw knowledge to find the gap between 35 and 100, then count on from 100 to 682.</p>									
<p>Key Vocabulary Equal to, take, take away, less, minus, subtract, leaves, distance between, difference between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is_?, count on, strategy, partition, tens, ones, regroup, decrease, hundreds, value, digit, <i>inverse</i>.</p>										

Subtraction – Year 5

Focus: Subtracting with numbers beyond 4 digits including decimals

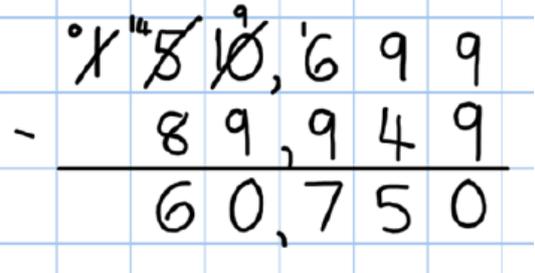
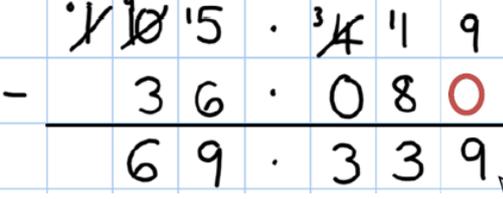
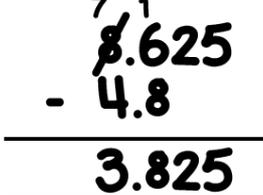
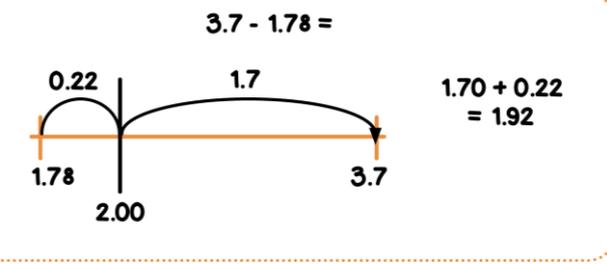
Children in year 5 will continue to use the column method of subtraction to solve problems including those where regrouping is required. They will subtract larger integers and begin to subtract decimal amounts.

	<p>Children will come across problems where regrouping will need to take place several times to complete the problem and over more than one column.</p>
	<p>Once confident with large integers, children will now be ready to move onto decimal numbers including lots in the context of measures and money. Just like addition, it is important that the children line up the decimal point and understand why they are doing this.</p>
	<p>Children should be able to mentally subtract a 2 or 3 digit number from a 4 digit number. $3458 - 89 =$ Use jigsaw knowledge to find the gap between 89 to 100, then count on from 100 to 3458.</p>
	<p>Children should also be able to mentally subtract a 3 digit number from a 3 digit number already crossing over 100. $628 - 235 =$</p> <p>Start at 235, jump up to the next multiple of 100, then to the final number.</p>
	<p>This should also be used for up to two decimal places, including money. e.g. $6.3 - 2.6 = 3.7$</p>
<p>Key Vocabulary Equal to, take, take away, less, minus, subtract, leaves, distance between, difference between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is_?, count on, strategy, partition, tens, ones, regroup, decrease, hundreds, value, digit, inverse, tenths, hundredths, decimal place, decimal</p>	

Subtraction – Year 6

Focus: Subtracting with increasingly complex numbers including decimals

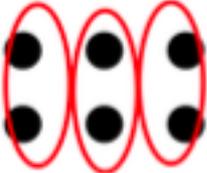
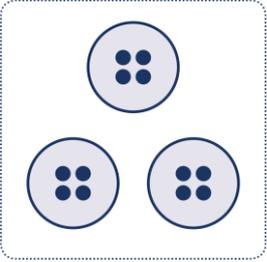
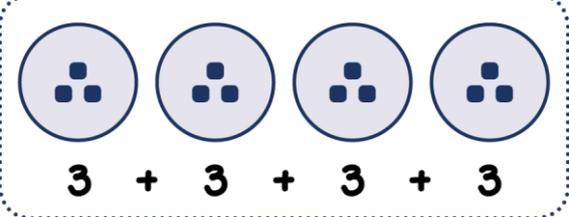
In year 6, children need to use mental methods and the column method of subtraction to solve an increasingly complex range of calculation including those with integers, those with decimals and those with mixed numbers.

	<p>Children will use the column method to solve problems involving numbers up to 6 digits and beyond and solve problems where they will need to use regrouping several times.</p>
	<p>They will also solve problems in context involving 3 decimal places. They will need to continue using their knowledge of decimal points to line up their numbers and place zeroes in any empty places so they fully understand the value of that column.</p>
	<p>Children should also be able to solve problems with mixed amounts of decimal places.</p>
	<p>This final mental subtraction challenge presents the situation whereby the two numbers involved have different amounts of decimal places (most usually one will have 1 dp and the other 2dp). This should only be learnt when they have mastered the 1d.1dp - 1d.1dp from Year 5.</p>
<p>Key Vocabulary Equal to, take, take away, less, minus, subtract, leaves, distance between, difference between, how many more, how many fewer/less than, most, least, count back, how many left, how much less is_?, count on, strategy, partition, tens, ones, regroup, decrease, hundreds, value, digit, inverse, tenths, hundredths, decimal place, decimal</p>	

Multiplication – Year 1

Focus: Solving one-step multiplication problems.

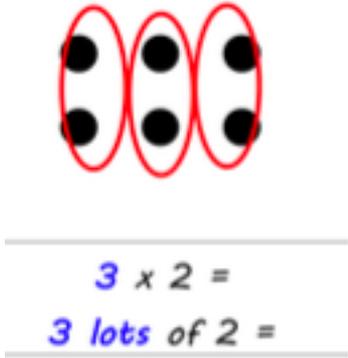
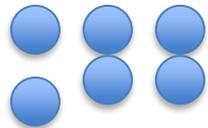
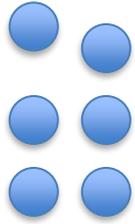
In year 1 children will begin to learn how to multiply. They will work on simple multiplication problems using tangible objects and pictorial recording.

Before moving on to multiplication, children need to be able to ☑ Have a secure understanding of addition and subtraction ☑ Begin to count in multiples of 2, 5, 10	
 <hr/> $3 \times 2 =$ $3 \text{ lots of } 2 =$ <hr/>	Children record each number sentence by drawing the array e.g. 3 lots of 2 = Children to draw 3 groups of 2 as an array. Can also record as repeated addition or multiplication number sentence. $2 + 2 + 2 = 6$ $3 \times 2 = 6$
	The teacher gives verbal instructions showing children how to 'multiply' the same amount of objects e.g. I give 3 children 4 sweets each, how many sweets are there in total?' The children record using objects and drawings Teacher models repeated addition on the board $4 + 4 + 4 = 12$ Use language such as groups of: 3 'groups/lots of' of 4
 $3 + 3 + 3 + 3$	Children move onto drawing pictorial representations of multiplication, drawing dots in 'groups/ lots of'. Children record using repeated addition $3 + 3 + 3 + 3 = 12$ $4 \text{ lots of } 3 = 12$ $(4 \times 3 = 12)$
Key Vocabulary Times, lots of, groups of, array, altogether, multiply, count, <i>tens</i> , <i>ones</i> ,	

Multiplication – Year 2

Focus: Solve problems involving multiplication

In year 2 children will move on from basic multiplication arrays and will be taught different strategies including repeated addition and mental methods. Children should also be able to multiply whole numbers by 10 ($8 \times 10 = 80$)

Children should be developing their recall and multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers throughout the year.	
 <p style="text-align: center;">$3 \times 2 =$ <i>3 lots of 2 =</i></p>	<p>Children recap using arrays and repeated addition e.g. 3 lots of 2 =</p> <p>Children to draw 3 groups of 2 as an array. Can also record as repeated addition or multiplication number sentence. $2 + 2 + 2 = 6$ $3 \times 2 = 6$</p> <p><i>Objects, pictorial representations and arrays can all be used to support learning.</i></p>
<div style="border: 1px dashed black; border-radius: 15px; padding: 10px; text-align: center;"> <p>$5 \times 2 =$ $2 + 2 + 2 + 2 + 2$</p> </div>	<p>Children should also then be able to convert 'times' number sentence into an addition one.</p>
<p>$3 \times 2 =$</p>  <p>$2 \times 3 =$</p> 	<p>Children should be shown that multiplication of two numbers can be done in any order (commutative, $3 \times 2 = 6$, $2 \times 3 = 6$) and should use arrays to represent this. Continue using language such as 3 groups of 2 = 6</p> <p><i>Physical objects/drawings used to aid working out.</i></p>
<p>Key Vocabulary Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, <i>tens, ones, value, commutative</i></p>	

Multiplication - Year 3

Focus: Multiplying 2 digit numbers by 1 digit numbers

In year 3 children will move on from arrays and start using the grid method of multiplication and mental methods. It is essential that before children move onto the grid method they are completely confident with all previous methods and have a solid grounding with mental methods and partitioning.

Children should be able to confidently recall multiplication facts for the 2, 3, 4, 5, 8 and 10 times table, this should be learnt and practiced throughout the year.

$$3 \times 50 = \boxed{150}$$


Smile multiplication (1d x 2d)

Step 1 – Draw a smile and multiply the numbers

Step 2 – Count the zeros in the question

Step 3 – Put the zeros in the answer

Start teaching by using written method as this become easier to solve mentally.

Note – highlight this can only be used when multiplying a multiple of 10. Eg $3 \times 60 =$ (will not work for $3 \times 62 =$)

$$4 \times 23 =$$

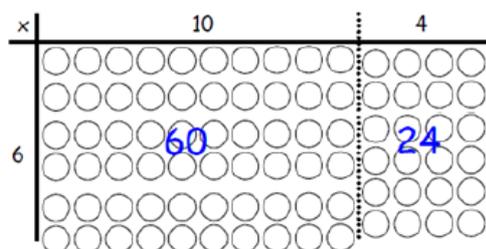
$$4 \times 20$$

$$4 \times 3$$

Children will learn that they can partition numbers and make 2 number sentences.

So 4×23 , the 23 can be partitioned into 20 and 3.

Children can use smile multiplication (see above) to solve the 2 number sentences, then adding both answers together.



The grid method should be introduced using an arrays model such as the one to the left for 14×6 . Children need to use their partitioning skills to partition the two-digit number and then use their existing knowledge of arrays to come to an answer with minimal support.

x	30	5
7	210	35

$$210 + 35 = 245$$

Multiplication grid method requires good organisation but also a solid understanding of partitioning and multiplication facts, as you can see in the example to the left for 35×7 . The children need to remember that once they have multiplied the partitioned parts of the number, they then need to add the two

Key Vocabulary

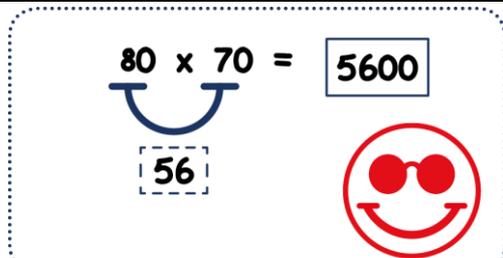
Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, *partition*, *grid method*, *multiple*, *product*, *tens*, *ones*, *value*

Multiplication – Year 4

Focus: Multiplying 2 and 3 digit numbers by 1 digit numbers

In year 4 children need to use the grid method confidently to solve problems where a 2 or 3 digit number is multiplied by a one-digit number. They will then need to move on to the use of short multiplication to solve 2 and 3 digit number multiplied by 1 digit problems.

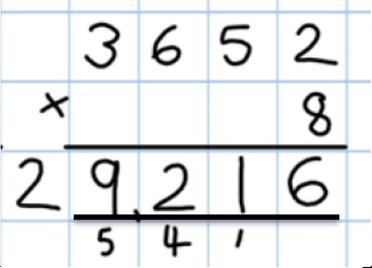
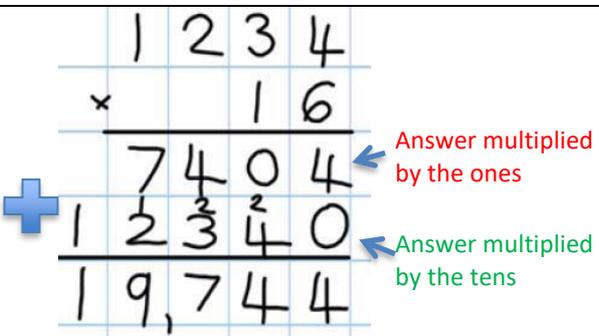
By the end of the year children are expected to quickly recall, and know all multiplication facts from the 1 to 12 times tables.

	<p>Children continue to develop their smile multiplication knowledge, moving on from 1d x 2, to 2digit x 2digit.</p> <p>Step 1 – Draw a smile and multiply the numbers</p> <p>Step 2 – Count the zeros in the question</p> <p>Step 3 – Put the zeros in the answer</p>																																
<table border="1" data-bbox="159 750 774 862"> <tbody> <tr> <td>x</td> <td>600</td> <td>10</td> <td>3</td> </tr> <tr> <td>5</td> <td>3000</td> <td>50</td> <td>15</td> </tr> </tbody> </table> <p>Add up 3000, 50 and 15 to make 3065.</p>	x	600	10	3	5	3000	50	15	<p>The grid method is extended in year 4 so children will now multiply up to 3 digit numbers by 1 digit numbers. When adding the 3 answers up to create a total, column addition should be used to ensure accuracy, especially where bridging will be needed.</p> <p>613 x 5 =</p>																								
x	600	10	3																														
5	3000	50	15																														
<table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>4</td> <td>6</td> <td>3</td> </tr> <tr> <td>x</td> <td></td> <td></td> <td>8</td> </tr> <tr> <td colspan="4"><hr/></td> </tr> <tr> <td></td> <td>3</td> <td>7</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> <td>4</td> </tr> <tr> <td colspan="4"><hr/></td> </tr> <tr> <td></td> <td>5</td> <td>2</td> <td></td> </tr> </tbody> </table> <p>Ensure regrouped numbers are put underneath and added onto the total of the next multiplication.</p>		H	T	O		4	6	3	x			8	<hr/>					3	7	0				4	<hr/>					5	2		<p>The column multiplication method is tricky and needs to be approached carefully.</p> <p>At first children should solve a problem using grid method and then observe the teacher solve a problem using short multiplication and make comparisons. How are they similar? Children need to go through it very slowly and carefully, unpicking each step until they are fully confident.</p> <p><i>Before using this method ensure understanding that the 6 is not 6 ones but 6 tens, use place value chart if needed.</i></p>
	H	T	O																														
	4	6	3																														
x			8																														
<hr/>																																	
	3	7	0																														
			4																														
<hr/>																																	
	5	2																															
<p>253 x 9 is approximately 250 x 10 = 2500</p>	<p>Approximation and estimation should become a regular part of classroom practice. Children should approximate an answer before using a method so they know if their answer is accurate or not.</p>																																
<p>Key Vocabulary Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, partition, grid method, column method, multiple, product, hundreds, tens, ones, value, <i>inverse</i></p>																																	

Multiplication – Year 5

Focus: Multiplying up to 4 digits by 1 or 2 digits

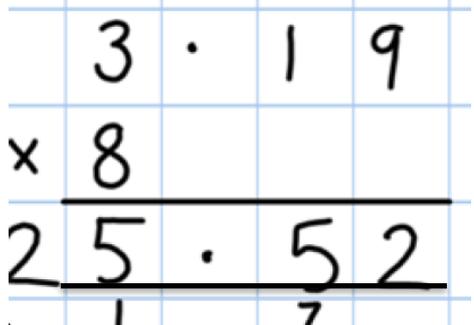
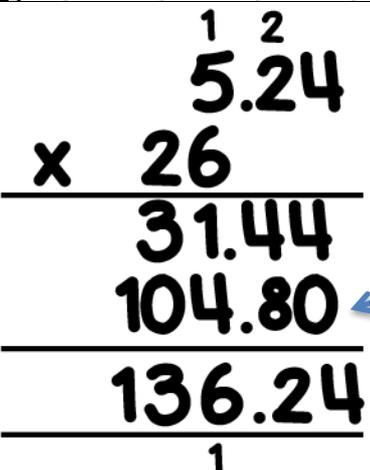
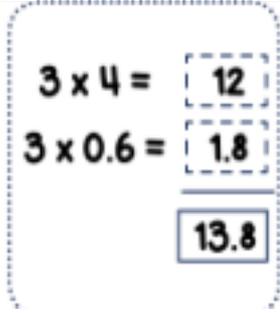
In year 5 children will continue to use short multiplication to solve increasingly richer problems that involve multiplying by 1 digit. They will then move on to long multiplication for problems that involve multiplying by 2 digits. Approximation will play an important part- with children making approximations before using long multiplication to help check their answer is correct.

Children should have a secure and quick recall of all times tables.										
<p>From 1 question we can't do</p> <p>$6 \times 725 =$</p> <p>Into 3 that we can!</p> <p>$6 \times 700 =$</p> <p>$6 \times 20 =$</p> <p>$6 \times 5 =$</p>	<p>Children will learn that they can partition numbers and make 3 number sentences.</p> <p>So the 725 can be partitioned into 700, 20 and 5.</p> <p>Children can use smile multiplication to solve the first 2 number sentences, then adding all answers together.</p>									
	Children will continue to use the short column multiplication method in a range of increasingly challenging problems, (when multiplying by 1digit).									
<p>$38 \times 69 =$</p> <table border="1" data-bbox="159 1209 638 1523"> <tr> <td>x</td> <td>60</td> <td>9</td> </tr> <tr> <td>30</td> <td>1800 😊</td> <td>270 😊</td> </tr> <tr> <td>8</td> <td>480 😊</td> <td>72</td> </tr> </table>	x	60	9	30	1800 😊	270 😊	8	480 😊	72	When multiplying by more than 1 digit, children will need to use long multiplication. The grid method can firstly be used to secure a good understanding.
x	60	9								
30	1800 😊	270 😊								
8	480 😊	72								
	Then moving on to the long multiplication column method. The first part is of course identical as we multiply by the ones digit. Then we need to multiply by the tens digit (the answer for that is written underneath the answer for the units digit). Before going into multiplying, we write a zero in the ones column as we are multiplying by the tens column. Then add both answers together.									
<p>Key Vocabulary</p> <p>Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, partition, grid method, multiple, product, tens, units, value, inverse, <i>square, factor, short/long column method for multiplication, regroup</i></p>										

Multiplication – Year 6

Focus: Consolidating short and long multiplication, multiplying decimals by 1 digit

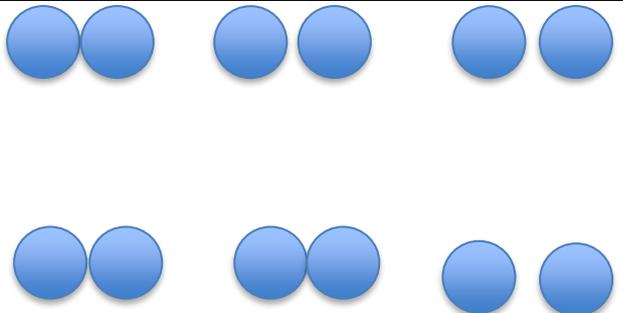
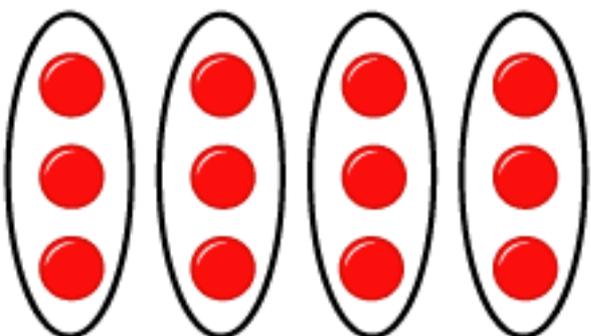
In year 6 children will consolidate all they know about short and long multiplication before they go to Secondary school. They will also learn the new skill of using short multiplication to multiply decimal numbers to 2 decimal places.

	<p>When multiplying decimals it is important to remember that the digit you are multiplying by needs to be lined up with the ones digits. As with all decimal work, the decimal points must be lined up and the children need to have a clear understanding why that is.</p>
	<p>Children should then move on to multiplying a 2-decimal place number by a 2-digit number. They will have experience in this but not using decimals.</p> <p>Start by multiplying the ones by the hundredths, etc. When it is time to multiply the tens, you place a zero in the first column. Then place the answer in the next column.</p>
<p>$3 \times 4.6 =$</p> 	<p>Children will also learn to multiply 1digit numbers by decimal numbers by partitioning the decimal number:</p>  <p>Making the number easier to multiply, then adding both answers back together. This method can also be used to solve 2 decimal places. E.g. 4×2.54</p>
<p>Key Vocabulary</p> <p>Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, partition, grid method, multiple, product, tens, ones, value, inverse, <i>square</i>, <i>factor</i>, <i>integer</i>, <i>decimal</i>, <i>short/long column method for multiplication</i>, <i>regroup</i></p>	

Division – Year 1

Focus: Solve one-step division problems.

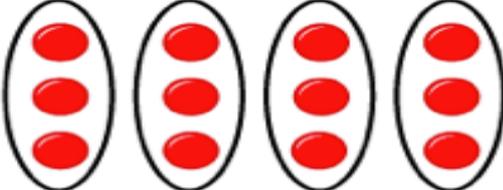
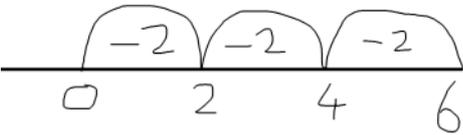
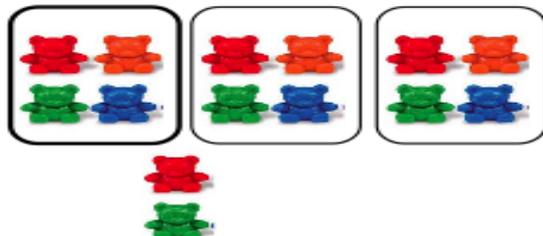
Children in year 1 will begin to learn how to divide. They will work on simple division problems using tangible objects and pictorial recordings.

	<p>The children will start by sharing objects between set groups e.g. 12 sweets shared among 3 children. They will discuss how to share equally so no group has more or less.</p> <p>Children will share (divide) between a range of numbers ($\div 2$, $\div 3$, $\div 4$)</p>
<p style="text-align: center;">$12 \div 3 = 4$</p>	<p>The teacher should model the written division sentence so the children are familiar with it before writing in own books. e.g. 12 shared (divided) into 3 groups = 4</p>
 <p style="text-align: center;">$12 \div 3 = 4$</p>	<p>Children will begin to use arrays to work out division sentences by drawing rings around each 'group'.</p>
<p>Key Vocabulary Share, share equally, groups of, lots of, array, divide, divided by,</p>	

Division – Year 2

Focus: Solve problems involving division

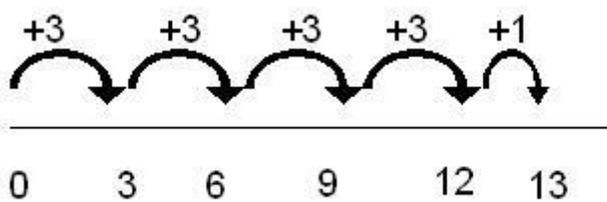
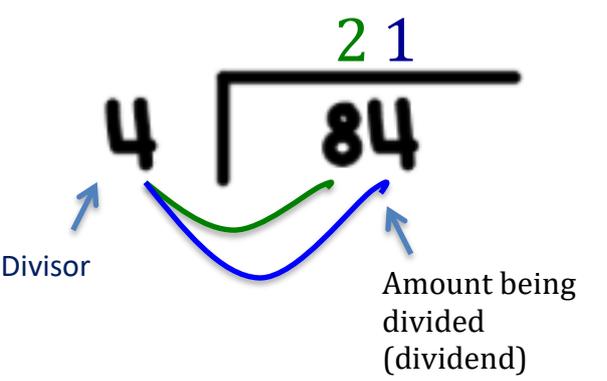
Children in year 2 will continue to work on basic division strategies and will learn that division is **not commutative**. Children should also be able to divide multiples of 10 by 10 ($30 \div 10 = 3$)

<p style="text-align: center;">$12 \div 3 = 4$</p> 	<p>Children will consolidate their understanding of division as sharing using objects and visual representations. They will then move on to division as grouping using objects such as bead strings. Teacher to use language such as: $15 \div 3$ is actually asking, 'How many lots of 3 are there in 15?' Children to make groups of 3 until they reach intended number. Children to write the number sentence using the correct symbols.</p>
 <p style="text-align: center;">$12 \div 3 = 4$</p>	<p>Children will continue to record by drawing arrays. For the example on the left they will start by drawing a row of 3 and then keep adding one to each row until they get to 12. The number of columns gives them the answer.</p>
<p style="text-align: center;">$6 \div 2 = 3$</p> 	<p>When the children are confident at using arrays to group for division, they will move on to using open number lines to do repeated subtraction. The number of jumps back is the answer. <i>Note: Do not work with numbers that have remainders at this stage.</i></p>
<p>$14 \div 3 =$ Divide objects between groups and see how much is left over</p> 	<p>Once children are secure with these methods. Division with remainders can be included. It is important that children physically experience feeling and seeing left over blocks 'remaining' in the starting pile. This will give them a real foundation for the many cognitive conversations they will need to have when faced with abstract division leading to remainders.</p>
<p style="text-align: center;">$21 \div 3 =$ ($7 \times 3 = 21$, therefore $21 \div 3$ would= 7)</p>	<p>Children should start to use their times tables knowledge to solve division problems. Concentrating on the 2, 3, 4 and 5 times tables. Fact families can support this. Moving onto remainders when children are ready. ($26 \div 5 =$)</p>
<p>Key Vocabulary Share, share equally, one each, two each..., group, groups of, lots of, array, divide, divided by, divided into, division, grouping, number line,</p>	

Division – Year 3

Focus: Dividing 2 digit numbers by 1 digit numbers moving from number line methods to short division.

Children in year 3 will continue to use a number line to solve division problems and will begin to jump more than one step at a time in the style of ‘chunking’. Once confident they will move on to short division without any remainders.

 <p>A number line starting at 0 and ending at 13. There are five jumps: four jumps of +3 (from 0 to 3, 3 to 6, 6 to 9, 9 to 12) and one jump of +1 (from 12 to 13). The numbers 0, 3, 6, 9, 12, and 13 are marked below the line.</p>	<p>Children will begin to use the grouping number line method to solve problems with remainders. They will start on zero and write the dividend at the end of their number line. They will jump in steps of the divisor until they get as close to the end as possible. Whatever is left over is the remainder. Using cubes or arrays alongside the number line will consolidate understanding.</p>
<p style="text-align: center;">$35 \div 5 =$ ($7 \times 5 = 35$, therefore $35 \div 5 = 7$)</p>	<p>Children need good knowledge of their times tables when using this method. Children should continue to use their times tables knowledge to solve division problems. Concentrating on the 2, 3, 4, 5, 8 and 10 times tables. Fact families will support this. Continue to use remainders when children are ready. ($26 \div 5 =$)</p>
 <p>A short division diagram for $84 \div 4$. The divisor 4 is on the left. The dividend 84 is inside a bus stop. The quotient 21 is written above the bus stop. A green arrow points from the 4 to the 8, and a blue arrow points from the 4 to the 4. Labels 'Divisor' and 'Amount being divided (dividend)' are at the bottom.</p>	<p>Once children are confident with number line methods then they should start work on short division also known as the bus stop method.</p> <p>Children move along the columns. Step 1: 4 goes into 8 twice, so the answer is 2 Step 2: 4 goes into 4, once, so the answer is 1</p> <p>The answer is written above the bus stop.</p> <p><i>Note: Children will start with simple problems where each digit is a multiple of the divisor. No remainders to be used in the answer or inside the bus stop.</i></p>
<p>Key Vocabulary Share, share equally, one each, two each..., group, groups of, lots of, array, divide, divided by, divided into, division, grouping, number line, left, left over, <i>inverse</i>, <i>short division</i>, <i>regroup</i>, <i>remainder</i>, <i>multiple</i></p>	

Division – Year 4

Focus: Consolidating and extending use of short division

Children in year 4 will continue to use short division to solve division problems. They will begin to work on remainders, including problems where there are remainders in the first numbers but not in the final answer. Children will solve problems by dividing up to 4-digit numbers by a 1-digit number.

	<p>Once confident with the method of short division, they will move on to problems where the first digit of the dividend is not a multiple of the divisor and therefore a remainder will need to be regrouped to the next column.</p> <p>Step 1: 3 goes into 8, twice, remainder 2</p> <p>Step 2: The remaining 2 is regrouped into the next column, adding 2 tens to the 1. The number to be divided is now 21.</p> <p>Step 3: 3 goes into 21, seven times.</p> <p>Answer is 21.</p> <p>Children may need to use other equipment to calculate the division and multiplication facts required.</p>
	<p>Children who can use short multiplication problems with remainders are now ready to work on 3 digit problems. The remainders can be anywhere in the dividend.</p> <p>Step 1: 7 does not go into 2. Regroup the 2 to the next column.</p> <p>Step 2: 7 goes in 29, 4 times. Remainder 1 to be regrouped to the next column.</p> <p>Step 3: 7 goes into 14, twice.</p> <p>Note: <i>Again, there should be remainders in the calculation but never in the final answer.</i></p>
	<p>Once children are secure with 3 digits, move onto 4 digit numbers being divided.</p> <p>Note: <i>Again, there should be remainders in the calculation but never in the final answer.</i></p>
<p>Key Vocabulary Share, share equally, one each, two each..., group, groups of, lots of, array, divide, divided by, divided into, division, grouping, number line, left over, inverse, short division, regroup, remainder, multiple, <i>divisible by, factor, dividend, divisor</i></p>	

Division – Year 5

Focus: Extending use of short multiplication to 5 digits and remainders in the answer

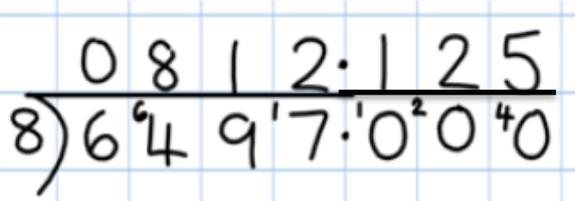
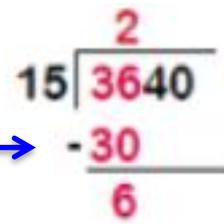
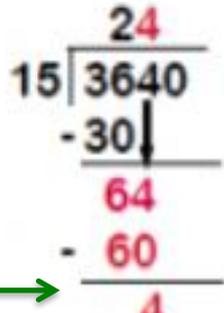
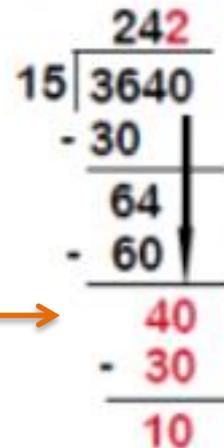
Children in year 5 will use short division to solve problems up to 4 digits long. For the first time they will use short division to solve problems that have a remainder in the final answer.

<div style="border: 1px dashed red; padding: 5px; text-align: center;"> $484 \div 6$ 480 </div> <div style="display: flex; flex-wrap: wrap; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid red; border-radius: 50%; padding: 10px; width: 45%; text-align: center;"> <p>Which multiple was it?</p> <p>80th!</p> </div> <div style="border: 1px solid red; border-radius: 50%; padding: 10px; width: 45%; text-align: center;"> <p>How many were left over?</p> <p>4!</p> </div> <div style="border: 1px solid red; border-radius: 50%; padding: 10px; width: 45%; text-align: center;"> <p>486 divided by 6?</p> <p>80 r 4!</p> </div> </div>	<p>Children to use smile Smile Multiplication fact to find a division fact (with and without remainders).</p> <p>Children should look at the first 2 digits of the number and notice that they are in the 6 times tables $484 \div 6 =$ <i>Children should identify that 48 is a multiple of 6.</i> $48 \div 6 = 8$ Therefore $480 \div 6 = 80$ The remainder is 4</p>
<div style="text-align: center;"> $83 \text{ r}5$ $6 \overline{) 503}$ </div>	<p>Children will now move on to remainders within the calculation and the answer.</p> <p>Use the steps as previously learnt:</p> <p>Step 1: 6 does not go into 5. Regroup the 5 into the next column.</p> <p>Step 2: 5 goes into 50, 8 times, remainder 2. Regroup the 2 into the next column.</p> <p>Step 3: 6 goes into 23, 3 times. Remainder 5.</p> <p>The answer is 83 with a remainder of 5.</p>
<div style="text-align: center;"> $666 \text{ r}4$ $6 \overline{) 4000}$ </div>	<p>Continue to use the above method with 4-digit numbers.</p>
<p>Key Vocabulary Share, share equally, one each, two each..., group, groups of, lots of, array, divide, divided by, divided into, division, grouping, number line, left, left over, inverse, short division, regrouping, remainder, divisor, dividend, multiple, divisible by, factor, <i>quotient, prime number, prime factors, composite number (non-prime)</i></p>	

Division – Year 6

Focus: Using short division to divide 4-digit numbers and express remainders as decimals and long division for dividing 2-digit numbers

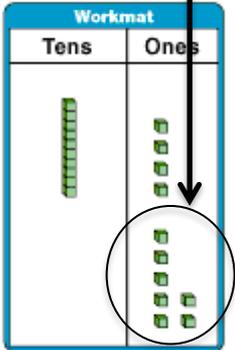
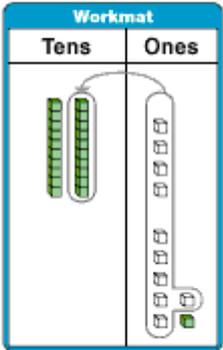
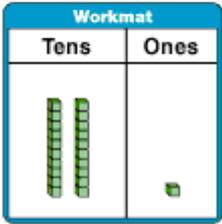
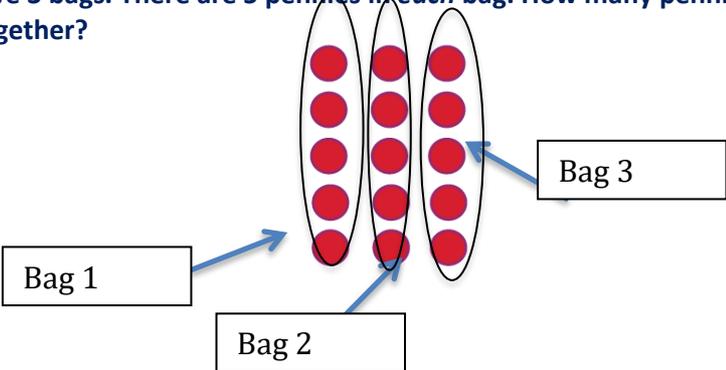
In year 6, children will use short division to divide decimal numbers by single digit numbers. The final step of division will be long division, which will be used to divide numbers by 2 digits.

	<p>The remainder in this answer would have been 1 but it has been expressed as a decimal. To do this, children need to insert a decimal point next to the units and carry the remainder over the decimal point. Zeros are inserted to the right of the decimal point to show that there was no value.</p>
<p>Step 1 →</p> 	<p>To divide by a 2-digit number, the children will use the method of long division. Any remainders would need to be expressed in a way that matched the context of the problem.</p> <p>Step1: 15 into 3 doesn't go, so look at the next digit. 15 goes into 36 twice, so put a 2 above the 6. $15 \times 2 = 30$. Take that 30 away from the 36 to get the remainder which is 6.</p>
<p>Step 2 →</p> 	<p>Step 2: Next carry the 4 down to make 64. 15 goes into 64 four times, so put a 4 above in the answer. $15 \times 4 = 60$. Take the 60 away from the 64 to get the remainder. $64 - 60 = 4$</p>
<p>Step 3 →</p> 	<p>Step 3: Carry the 0 down to make 40. 15 goes into 40 two times, so put a 2 above in the answer. $15 \times 2 = 30$ take 30 from the 40 to get the remainder. $40 - 30 = 10$</p> <p>The answer is 242, remainder 10.</p>

Key Vocabulary

Share, share equally, one each, two each..., group, groups of, lots of, array, divide, divided by, divided into, division, grouping, number line, left, left over, inverse, short division, regroup, remainder, multiple, divisible by, factor, quotient, prime number, prime factors,

Glossary

Key words	Definitions
Place value	Place value is the value of each digit in a number. It means understanding that 582 is made up of 500, 80 and 2, (not 5, 8 and 2)
Partition	Partitioning is splitting a number into smaller sections. This is done to explain that 23 is actually made up of 20 (2 tens) and 3 (3 ones). <div style="text-align: center;"> $\begin{array}{c} 23 \\ \swarrow \quad \searrow \\ 20 \quad 3 \end{array}$ </div>
Regrouping	<p>Regrouping is the process of changing the column of a number when adding or subtracting e.g. Changing ones into tens.</p> <p style="text-align: center;">$14 + 7 =$</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p style="color: blue; font-weight: bold;">Think:</p> <p>I have 1 ten and 4 ones. I want to add 7 ones.</p>  <p>Do I need to regroup?</p> </div> <div style="text-align: center;"> <p style="color: blue; font-weight: bold;">Think:</p> <p>I know that 4 + 7 is 11, so I can make a ten.</p>  </div> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Each place value column can only hold 9</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  <p>2 tens 1 one = 21</p> </div>
Array	<p>Arrays are a pictorial representation to help children understand multiplication. I have 3 bags. There are 5 pennies in each bag. How many pennies do I have altogether?</p> <div style="text-align: center;">  </div> <p>The teacher might then explain that rather than counting all the pennies individually, you could work out the answer by counting each line in 5s. The teacher could then point to each line and count 5, 10, 15 to show the children that there were 15 pennies in all.</p>
Commutative	Commutative refers to being able to move numbers around within number sentences but still having the same answer. e.g: $2 + 3 = 5$, if we move the numbers around the answer is the same $3 + 2 = 5$.

