
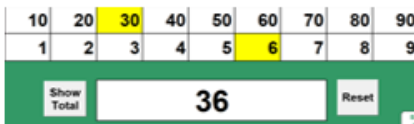


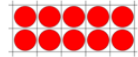
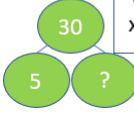


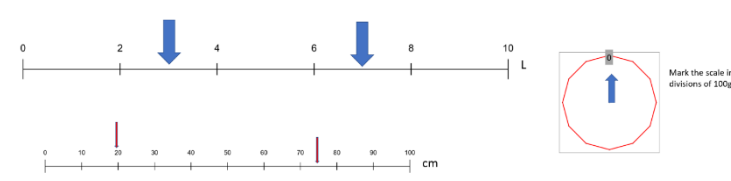
Mathematics Medium Term Planning: Spring term Y2/3.

Week.	Mathematical aspect	Non-negotiable end points Year 2.	Non-negotiable end points Year 3	Curriculum Statements. Year 2.	Curriculum Statements. Year 3.																																																												
1.	Number and place value: estimating, counting, and comparing quantities.	Knows how to represent numbers in different ways. Compares and orders on a number line. Knows how to cross the 100 boundary.	Knows the relative position of numbers. Knows zero as a place holder in three-digit numbers. Knows the rules of rounding.	<ul style="list-style-type: none"> <li>● To count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward.</li> <li>● To recognise the place value of each digit in a two-digit number (tens, ones).</li> <li>● To identify, represent and estimate numbers using different representations, including the number line.</li> <li>● To compare and order numbers from 0 up to 100; use <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs.</li> <li>● To read and write numbers to at least 100 in numerals and in words.</li> <li>● To use place value and number facts to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>● To recognise the place value of each digit in a three-digit number (hundreds, tens, ones).</li> <li>● To compare and order numbers up to 1000.</li> <li>● To read and write numbers up to 1000 in numerals and in words.</li> </ul>																																																												
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Count on from 88. Which are the missing numbers?</p> <table border="1" style="font-size: small;"> <tr><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td></tr> <tr><td>97</td><td>98</td><td>99</td><td>100</td><td>101</td><td></td><td></td><td></td><td>105</td><td>106</td><td>107</td><td>108</td></tr> <tr><td>109</td><td>110</td><td>111</td><td>112</td><td>113</td><td>114</td><td></td><td></td><td>117</td><td>118</td><td>119</td><td>120</td></tr> </table> <p>47 = 4 tens 7 ones      47 = 30 + 17</p> <p>47 = 20 + 27</p> </div> <div style="width: 45%;"> <p>Place 102, 107, 109 on the number line.</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> <p>Cross the 100</p> <table border="1" style="font-size: x-small;"> <tr><td>97</td><td>98</td><td>99</td><td>100</td><td>101</td><td>102</td><td>103</td><td>104</td><td>105</td><td>106</td><td>107</td><td>108</td></tr> <tr><td>109</td><td>110</td><td>111</td><td>112</td><td>113</td><td>114</td><td>115</td><td>116</td><td>117</td><td>118</td><td>119</td><td>120</td></tr> </table> <p>37 3 tens and 7 ones 30 + 7 Thirty seven</p> <p>37 &gt; 32 37 &lt; 39</p> </div> <div style="width: 45%;"> <p>Place 376, 307, 458, 409 on the number line</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p>Round these numbers to the nearest 10 and 100.</p> <p>678 342 704</p> </div>						85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101				105	106	107	108	109	110	111	112	113	114			117	118	119	120	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
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109	110	111	112	113	114	115	116	117	118	119	120																																																						
2.	Addition and subtraction: concrete, visual and number facts. Written methods 2 and 3 digit numbers, column methods for Y3.	Knows number bonds to and within 20. Fact families for + and -. Knows efficient strategies for adding and subtracting for up to two 2 digit numbers. Knows that addition is inverse to subtraction	Knows efficient mental strategies including partitioning and adjusting for addition and subtraction.	<p>To solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> <li>● Using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>● Applying their increasing knowledge of mental and written methods.</li> <li>● To recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.</li> <li>● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers.</li> <li>● To show that addition can be done in any order (commutative) and subtraction cannot.</li> <li>● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.</li> </ul>	<ul style="list-style-type: none"> <li>● To add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li>● a three-digit number and ones</li> <li>● a three-digit number and tens</li> <li>● a three-digit number and hundreds.</li> </ul> </li> <li>● To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> <li>● To add and subtract numbers with up to three digits, using the efficient written methods of columnar addition and subtraction.</li> </ul>																																																												

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<p><b>Near doubles</b>  <math>13+14 =</math>  <b>Double 13= 26</b>  <math>26+1 = 27</math>                      or  <b>Double 14 = 28</b>  <math>28-1 = 27</math></p> <p><b>Using known facts</b>  <math>40 + 80 = 120</math> using <math>4 + 8 = 12</math>                      So, <math>400 + 800 = 1200</math></p> <p><b>Remodelling strategy</b>  <math>243 + 198</math>  <math>241 + 200 = 441</math></p> <p><math>400 + \square = 467</math>  <math>400 + \square = 567</math>  <math>400 + \square = 967</math></p> <p><math>500 - \square = 410</math>  <math>500 - \square = 390</math>  <math>500 - \square = 260</math></p>	<p><math>25 + 25 = 50</math> double  <math>24 + 25 = 49</math> near double  <math>28 + 20 = 48 + 10, +10</math></p> <p><math>25 - 20 = 5</math> difference  <math>50 - 25 = 25</math> halving  <math>28 - 12 = 16 - 10, - 6</math></p> <p><math>3 + 27 = 30, 27 + 3 = 30</math>  <math>70 - 11 = 70 - 10 - 1</math></p>	 <p><math>625</math>  <math>+ 48</math>  <math>13 (5+8)</math>  <math>60 (20 + 40)</math>  <math>+600 (600 + 0)</math>  <u>673</u></p>	<p><math>754</math>   <math>700</math>   <math>50</math>   <math>4</math>  <math>- 86</math>   <math>80</math>   <math>6</math>  <hr/> <math>668</math>   <math>600</math>   <math>60</math>   <math>8</math></p> <p><math>754</math>   <math>600</math>   <math>140</math>   <math>14</math>  <math>- 86</math>   <math>80</math>   <math>6</math>  <hr/> <math>668</math>   <math>600</math>   <math>60</math>   <math>8</math></p>	<p>Add and subtract                      10                      3                      17</p> <table border="1" data-bbox="1528 210 1751 294"> <tr><td>17</td><td>41</td><td>50</td></tr> <tr><td>31</td><td>34</td><td>15</td></tr> </table> <p>from each number.                      Which is the best method                      for each calculation?</p> <table border="1" data-bbox="1380 451 1528 556"> <tr><td>19</td><td>18</td></tr> <tr><td>24</td><td>27</td></tr> <tr><td>25</td><td>19</td></tr> </table> <p>Find two numbers that are</p> <ul style="list-style-type: none"> <li>• near double</li> <li>• double</li> <li>• close together</li> </ul> <p>+ and - these numbers using the best method.</p>	17	41	50	31	34	15	19	18	24	27	25	19	<p>Correct the mistake  <math>670 + 30 = 700</math>  <math>670 + \square = 750</math>, so the missing value is 70.</p> <p>Correct the mistake  <math>940 - 60 = 880</math>  <math>940 - \square = 780</math>, so the missing value is 190.</p> <div data-bbox="2418 231 2686 388" style="border: 1px solid gray; border-radius: 15px; padding: 5px; background-color: #d3d3d3;"> <p>Which of these equations does 65 fit into to make it correct.</p> </div> <p><math>325 + \square = 390</math>  <math>640 - \square = 575</math>  <math>795 = 740 + \square</math></p>
17	41	50															
31	34	15															
19	18																
24	27																
25	19																
<p>3.</p>	<p>Addition and subtraction:                      Estimations and accuracy written methods</p>	<p>Knows the properties of place value.                      Uses number knowledge to add and subtract.</p>	<p>Knows how to calculate with columnar methods regrouping the tens and exchanging in subtraction.</p>	<ul style="list-style-type: none"> <li>• To recognise the place value of each digit in a 2-digit number (tens, ones).</li> <li>• To use place value and number facts to solve problems.</li> <li>• Applying their increasing knowledge of mental and written methods.</li> <li>• To show that addition can be done in any order (commutative) and subtraction cannot.</li> <li>• To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.</li> </ul>	<ul style="list-style-type: none"> <li>• To add and subtract numbers with up to three digits, using the efficient written methods of columnar addition and subtraction.</li> <li>• To estimate the answer to a calculation and use inverse operations to check answers.</li> <li>• To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> </ul>												
 <p>Additive and base ten properties</p>	<p><b>Columnar addition</b></p> <p><math>625</math>  <math>+ 48</math>  <math>673</math></p> <p>Regroup the 10</p>	<p><b>Columnar subtraction</b></p> <p><math>674</math>  <math>- 286</math>  <math>468</math></p> <p>Emphasis on language of place value, i.e. 14 units subtract 6 units, 14 tens subtract 8 tens, and 6 hundreds subtract 2 hundreds.</p>	<p><math>36 + 21 =</math>  <math>30 + 20 = 50</math>  <math>6 + 1 = 7</math>  <math>36 + 21 = 57</math></p> <p>Add  <math>42 + 16</math>  <math>31 + 18</math></p> <p><math>36 - 21 =</math>  <math>30 - 20 = 10</math>  <math>6 - 1 = 5</math>  <math>36 - 21 = 15</math></p> <p>Subtract  <math>46 - 12</math>  <math>38 - 11</math></p> <p>Use the partitioning method, add and subtract with these numbers.</p> <table border="1" data-bbox="1676 1312 1855 1396"> <tr><td>18</td><td>23</td></tr> <tr><td>27</td><td>22</td></tr> </table>	18	23	27	22	<p>Show how to add and subtract these numbers with 324.</p> <p><math>675</math>  <math>43</math>  <math>900</math>  <math>127</math></p> <p>Add 173 to  <math>607</math>  <math>328</math>  <math>519</math></p> <p>Subtract these from 435  <math>127</math>  <math>238</math>  <math>276</math></p>									
18	23																
27	22																
<p>4.</p>	<p>Multiplication and division:                      repeated addition, arrays, grouping and using times tables facts.                      Multiplying by 10</p>	<p>Knows the operations of multiplication (repeated addition) and division (equal groups of).                      Knows the 2s, 5s and 10s times tables and can find related facts.</p>	<p>Knows the 2, 3, 4- and 8-times tables and the doubling patterns, odds and evens.                      Knows how to multiply using partitioning.</p>	<ul style="list-style-type: none"> <li>• To recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers.</li> <li>• To calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication, division and equals signs.</li> <li>• To recognise and use the inverse relationship between multiplication and division in calculations.</li> </ul>	<ul style="list-style-type: none"> <li>• To recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</li> <li>• To explain the effect of multiplying by 10 and multiples of 10</li> <li>• To write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods.</li> </ul>												

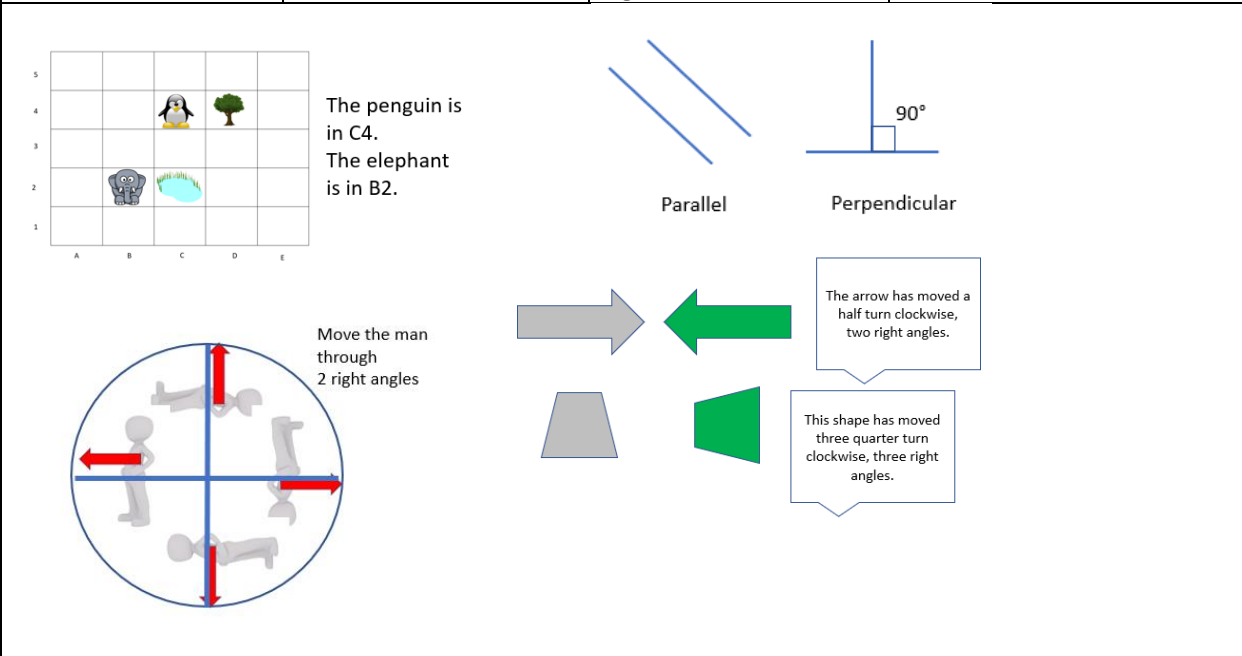
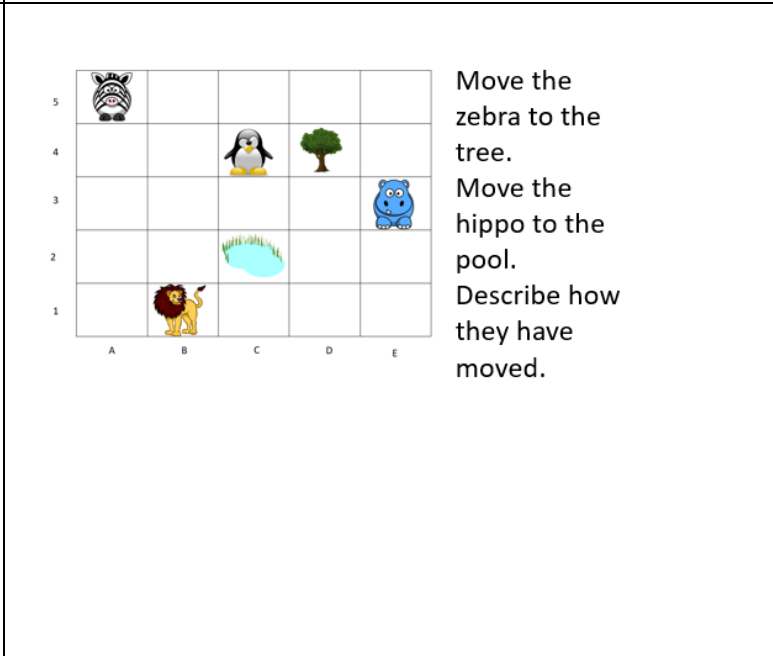
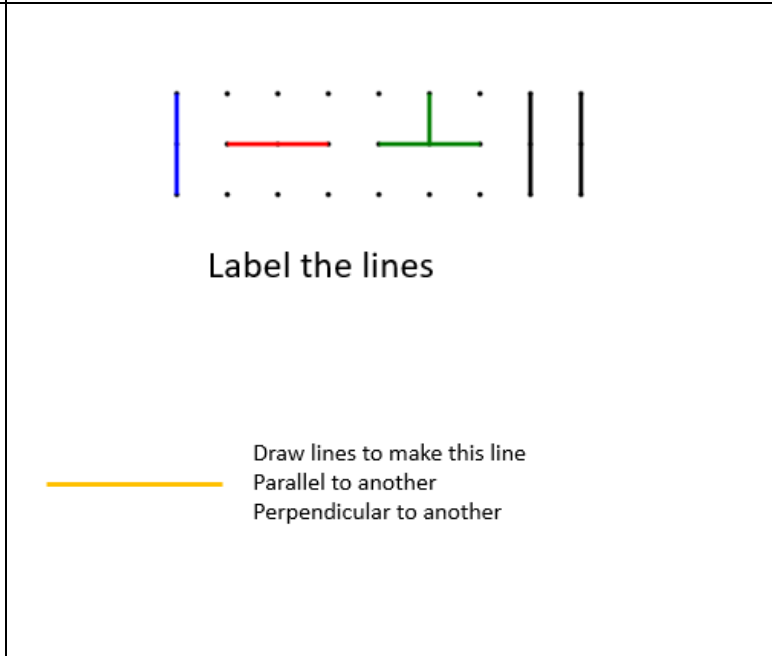
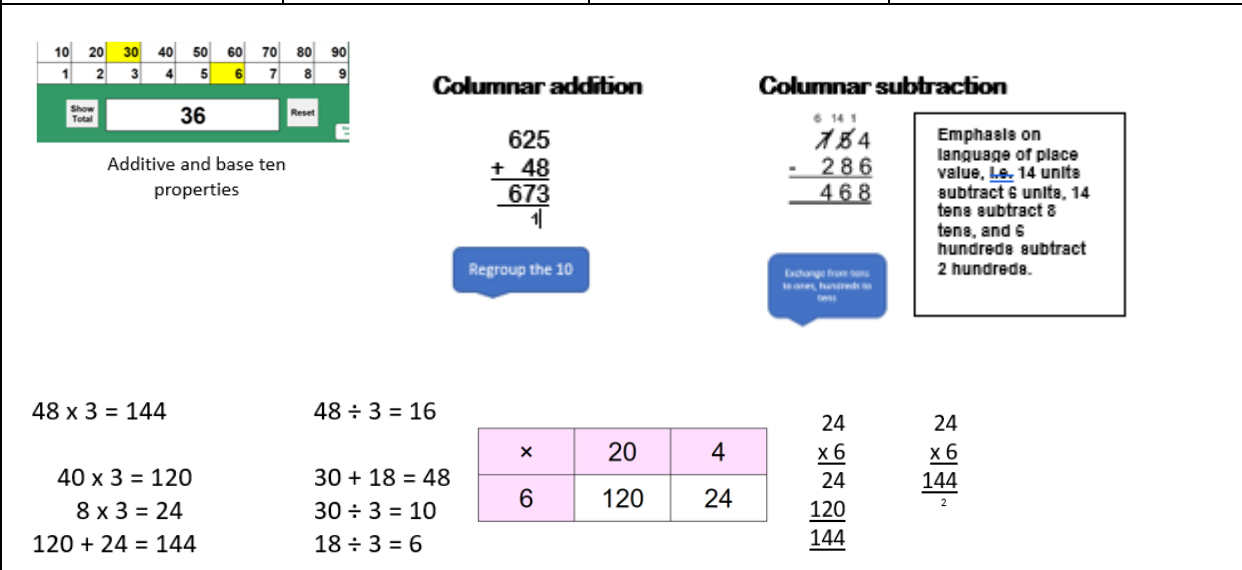
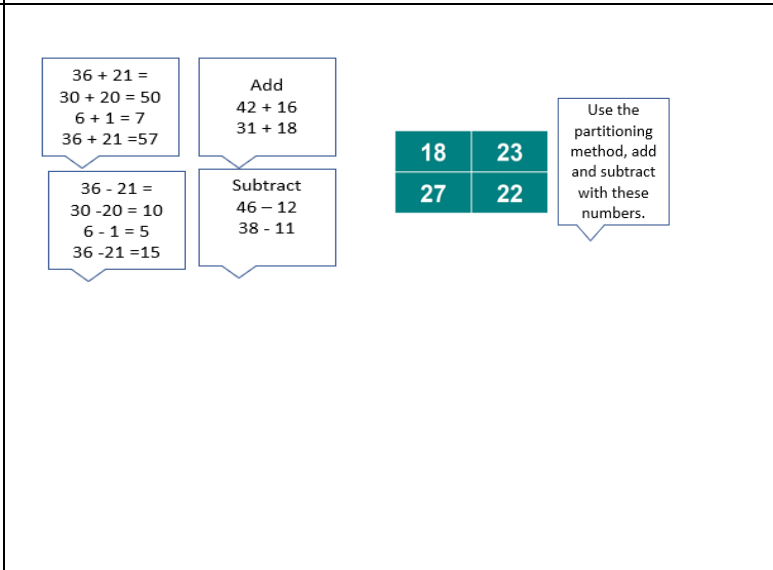
## Mathematics Medium Term Planning: Spring term Y2/3.

		Knows that multiplication is inverse to division	Knows how to find corresponding division facts.	<ul style="list-style-type: none"> <li>To show that multiplication of two numbers can be done in any order (commutative) and division for one number by another cannot.</li> <li>To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.</li> </ul>	<ul style="list-style-type: none"> <li>To solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects</li> </ul>																																																																																																																																																																							
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Convince me that <math>3 \times 5</math> is the same as <math>5 \times 3</math>.</p>  </div> <div style="width: 30%;"> <p>Complete the fact family:</p> <math>2 \times 5 = 10</math>  <math>5 \times 2 = 10</math>  <math>10 \div 5 = 2</math>  <math>10 \div ??? = 2</math> </div> <div style="width: 35%;"> <table border="1" style="font-size: 8px; text-align: center;"> <tr><th>x</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th></tr> <tr><th>1</th><td>1x1</td><td>1x2</td><td>1x3</td><td>1x4</td><td>1x5</td><td>1x6</td><td>1x7</td><td>1x8</td><td>1x9</td><td>1x10</td><td>1x11</td><td>1x12</td></tr> <tr><th>2</th><td>2x1</td><td>2x2</td><td>2x3</td><td>2x4</td><td>2x5</td><td>2x6</td><td>2x7</td><td>2x8</td><td>2x9</td><td>2x10</td><td>2x11</td><td>2x12</td></tr> <tr><th>3</th><td>3x1</td><td>3x2</td><td>3x3</td><td>3x4</td><td>3x5</td><td>3x6</td><td>3x7</td><td>3x8</td><td>3x9</td><td>3x10</td><td>3x11</td><td>3x12</td></tr> <tr><th>4</th><td>4x1</td><td>4x2</td><td>4x3</td><td>4x4</td><td>4x5</td><td>4x6</td><td>4x7</td><td>4x8</td><td>4x9</td><td>4x10</td><td>4x11</td><td>4x12</td></tr> <tr><th>5</th><td>5x1</td><td>5x2</td><td>5x3</td><td>5x4</td><td>5x5</td><td>5x6</td><td>5x7</td><td>5x8</td><td>5x9</td><td>5x10</td><td>5x11</td><td>5x12</td></tr> <tr><th>6</th><td>6x1</td><td>6x2</td><td>6x3</td><td>6x4</td><td>6x5</td><td>6x6</td><td>6x7</td><td>6x8</td><td>6x9</td><td>6x10</td><td>6x11</td><td>6x12</td></tr> <tr><th>7</th><td>7x1</td><td>7x2</td><td>7x3</td><td>7x4</td><td>7x5</td><td>7x6</td><td>7x7</td><td>7x8</td><td>7x9</td><td>7x10</td><td>7x11</td><td>7x12</td></tr> <tr><th>8</th><td>8x1</td><td>8x2</td><td>8x3</td><td>8x4</td><td>8x5</td><td>8x6</td><td>8x7</td><td>8x8</td><td>8x9</td><td>8x10</td><td>8x11</td><td>8x12</td></tr> <tr><th>9</th><td>9x1</td><td>9x2</td><td>9x3</td><td>9x4</td><td>9x5</td><td>9x6</td><td>9x7</td><td>9x8</td><td>9x9</td><td>9x10</td><td>9x11</td><td>9x12</td></tr> <tr><th>10</th><td>10x1</td><td>10x2</td><td>10x3</td><td>10x4</td><td>10x5</td><td>10x6</td><td>10x7</td><td>10x8</td><td>10x9</td><td>10x10</td><td>10x11</td><td>10x12</td></tr> <tr><th>11</th><td>11x1</td><td>11x2</td><td>11x3</td><td>11x4</td><td>11x5</td><td>11x6</td><td>11x7</td><td>11x8</td><td>11x9</td><td>11x10</td><td>11x11</td><td>11x12</td></tr> <tr><th>12</th><td>12x1</td><td>12x2</td><td>12x3</td><td>12x4</td><td>12x5</td><td>12x6</td><td>12x7</td><td>12x8</td><td>12x9</td><td>12x10</td><td>12x11</td><td>12x12</td></tr> </table> </div> </div>		x	1	2	3	4	5	6	7	8	9	10	11	12	1	1x1	1x2	1x3	1x4	1x5	1x6	1x7	1x8	1x9	1x10	1x11	1x12	2	2x1	2x2	2x3	2x4	2x5	2x6	2x7	2x8	2x9	2x10	2x11	2x12	3	3x1	3x2	3x3	3x4	3x5	3x6	3x7	3x8	3x9	3x10	3x11	3x12	4	4x1	4x2	4x3	4x4	4x5	4x6	4x7	4x8	4x9	4x10	4x11	4x12	5	5x1	5x2	5x3	5x4	5x5	5x6	5x7	5x8	5x9	5x10	5x11	5x12	6	6x1	6x2	6x3	6x4	6x5	6x6	6x7	6x8	6x9	6x10	6x11	6x12	7	7x1	7x2	7x3	7x4	7x5	7x6	7x7	7x8	7x9	7x10	7x11	7x12	8	8x1	8x2	8x3	8x4	8x5	8x6	8x7	8x8	8x9	8x10	8x11	8x12	9	9x1	9x2	9x3	9x4	9x5	9x6	9x7	9x8	9x9	9x10	9x11	9x12	10	10x1	10x2	10x3	10x4	10x5	10x6	10x7	10x8	10x9	10x10	10x11	10x12	11	11x1	11x2	11x3	11x4	11x5	11x6	11x7	11x8	11x9	11x10	11x11	11x12	12	12x1	12x2	12x3	12x4	12x5	12x6	12x7	12x8	12x9	12x10	12x11	12x12	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Write all the x and ÷ facts</p>  </div> <div style="border: 1px solid black; padding: 5px;"> <p>Complete</p> <math>25 \div \square = 5</math>  <math>6 \times 10 = \square</math>  <math>\square \times 7 = 35</math> </div> </div>	<p><math>3 \times 6 = 18</math> so  <math>30 \times 6 = 180</math></p> <p>Which of these are true?</p> <p><math>30 \times 8 = 240</math>  <math>4 \times 60 = 240</math>  <math>40 \times 5 = 240</math>  <math>80 \times 3 = 240</math>  <math>6 \times 4 = 240</math></p> <div style="border: 1px solid gray; border-radius: 15px; padding: 10px; background-color: #e0e0e0;"> <p>True or false?</p> <p><math>75 \div 5 = 15</math>  <math>750 \div 10 = 75</math>  <math>84 \div 12 = 8</math>  <math>840 \div 10 = 40</math></p> </div>
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5.	Multiplication and division: multiplying using a method and dividing with remainders	Knows the multiples of 2, 5 and 10 and recognises when there will be a remainder.	Knows how to partition numbers when multiplying in a grid/short method. Knows how divide and record remainders. Knows how to recognise multiples of a divisor.	<ul style="list-style-type: none"> <li>To show that multiplication of two numbers can be done in any order (commutative) and division for one number by another cannot.</li> <li>To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.</li> </ul>	<ul style="list-style-type: none"> <li>To solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects</li> </ul>																																																																																																																																																																							
<p><b>Short multiplication</b></p> <p>Expanded</p> <p>23 x 8 ----- 160 (8 x 20) 184</p>		<p><b>Short division</b></p> $72 \div 3 =$ <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <table style="font-size: 12px;"> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">2</td><td style="padding: 2px 5px;">4</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">3</td><td style="padding: 2px 5px;">7</td></tr> </table> </div> <p>'72 divided by 3. 7 tens shared equally between 3 is 2 with a remainder of 1 ten. Exchange the 1 ten for 10 units. I now have 12 units which shared equally between 3 is 4. The answer is 24.'</p>	2	4	3	7	<p>Solve these equations</p> $75 \times 5 =$ $36 \times 4 =$ $22 \times 8 =$	<p>Solve these equations</p> $95 \div 5 =$ $56 \div 4 =$ $84 \div 2 =$	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Ben buys 30 fish for his pet shop. He puts them into tanks, 5 in each one. How many tanks does he need?</p> </div> <div style="text-align: center;">  <p>Sita buys 26 fish for her pet shop. She puts them into tanks, 5 in each one. How many tanks does she need?</p> </div> </div> <div style="border: 1px solid blue; border-radius: 15px; padding: 5px; background-color: #4a86e8; color: white; text-align: center; margin: 10px auto; width: 80%;"> <p>If I share an even number of cakes between 2 people there will never be a left over. Convince me.</p> </div>	<p><math>26 \div 5 = 5 \text{ r}1</math>  <math>76 \div 5 = 15 \text{ r}1</math></p> <p>So I know that any number divided by 5 that ends in a 6 will have r1. Prove it.</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px; background-color: #4a86e8; color: white; width: 45%;"> <p>Any number with a digit sum of 3 will always divide by 3. Is that true?</p> </div> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px; background-color: #4a86e8; color: white; width: 45%;"> <p>Any number with a factor of 5 must end in 0 or 5. Prove it.</p> </div> </div>																																																																																																																																																																		
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6.	Measurement: length, mass, capacity	Knows the relationships between units of measure for length, mass and capacity.	Knows how to measure accurately reading the marked divisions in the appropriate units.	<p>To choose and use appropriate standard units to estimate and measure length/ height in any direction; mass; temperature; volume and capacity to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels.</p> <ul style="list-style-type: none"> <li>To compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math>.</li> </ul>	<ul style="list-style-type: none"> <li>To measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</li> </ul>																																																																																																																																																																							
<table border="1" style="font-size: 10px; width: 100%;"> <tr><td>1km</td><td>1000 m</td></tr> <tr><td>1m</td><td>100 cm</td></tr> <tr><td>1cm</td><td>10 mm</td></tr> <tr><td>1 kg</td><td>1000g</td></tr> <tr><td>1 l</td><td>1000ml</td></tr> </table>		1km	1000 m	1m	100 cm	1cm	10 mm	1 kg	1000g	1 l	1000ml	<table border="1" style="font-size: 10px; width: 100%;"> <tr><th>Measurement</th><td></td><td></td></tr> <tr><td>Length</td><td>100cm</td><td>1m</td></tr> <tr><td>Mass</td><td>1000g</td><td>1kg</td></tr> <tr><td>Capacity</td><td>1000ml</td><td>1 L</td></tr> </table>	Measurement			Length	100cm	1m	Mass	1000g	1kg	Capacity	1000ml	1 L	<p style="text-align: center;"><b>Complete the table</b></p> <table border="1" style="font-size: 10px; width: 100%;"> <tr><th>Measurement</th><td></td><td></td><th>Equipment</th></tr> <tr><td>Length</td><td>? cm</td><td>1m</td><td>ruler</td></tr> <tr><td>Mass</td><td>1000g</td><td>1kg</td><td>?</td></tr> <tr><td>Capacity</td><td>1000ml</td><td>?</td><td>Measuring jug</td></tr> </table>	Measurement			Equipment	Length	? cm	1m	ruler	Mass	1000g	1kg	?	Capacity	1000ml	?	Measuring jug																																																																																																																																			
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## Mathematics Medium Term Planning: Spring term Y2/3.

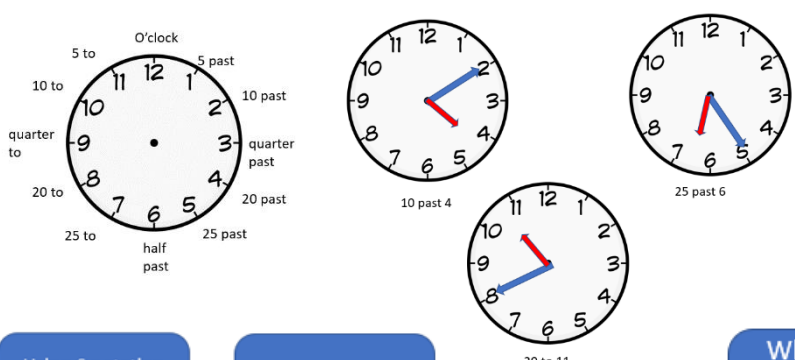
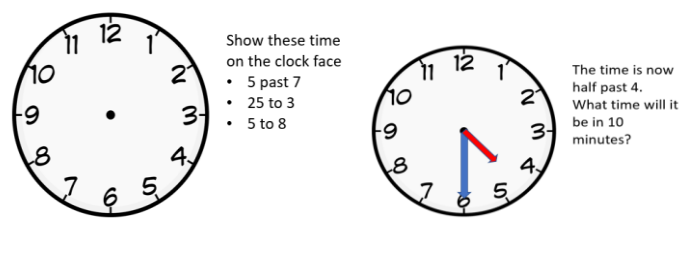
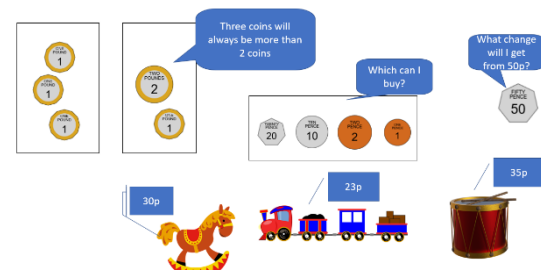


7.	<p><b>Fractions:</b> representing, comparing and ordering unit non unit fractions. Adding and subtracting unit/non unit fractions.</p>	<p>Knows simple equivalence in halves and quarters. Knows thirds are three equal parts of a whole.</p>	<p>Knows how to add and subtract within the same denominator.</p>	<ul style="list-style-type: none"> <li>● To recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4.</li> <li>● To write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half.</li> </ul>	<ul style="list-style-type: none"> <li>● To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</li> <li>● To recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</li> <li>● To compare and order unit fractions, and fractions with the same denominators.</li> <li>● To solve problems that involve all of the above.</li> </ul>
8.	<p><b>Geometry:</b> properties of shape, symmetry. Right angles</p>	<p>Know the mathematical names and properties of 2d and 3d shapes. Knows symmetry is reflection in a vertical line</p>	<p>Know and recognise right angles in 2d shapes. Knows acute and obtuse in relation to right angles.</p>	<p>To identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line.</p> <ul style="list-style-type: none"> <li>● To identify and describe the properties of 3D shapes including the number of edges, vertices and faces.</li> <li>● To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid.</li> <li>● To compare and sort common 2D and 3D shapes and everyday objects.</li> </ul>	<p>To recognise angles as a property of shape and associate angles with turning. To identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. To identify horizontal, vertical, perpendicular and parallel lines in relation to other lines.</p>

Mathematics Medium Term Planning: Spring term Y2/3.

<p>9.</p>	<p>Geometry: Position and direction</p>	<p>Knows how to describe position and movement using clockwise, anti-clockwise, left and right.</p>	<p>Knows how to describe lines using mathematical terms.</p>	<p>To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) and movement in a straight line.</p>	<p>To identify horizontal, vertical, perpendicular and parallel lines in relation to other lines.</p>
 <p>The penguin is in C4. The elephant is in B2.</p> <p>Move the man through 2 right angles</p> <p>Parallel</p> <p>Perpendicular</p> <p>90°</p> <p>The arrow has moved a half turn clockwise, two right angles.</p> <p>This shape has moved three quarter turn clockwise, three right angles.</p>		 <p>Move the zebra to the tree. Move the hippo to the pool. Describe how they have moved.</p>		 <p>Label the lines</p> <p>Draw lines to make this line Parallel to another Perpendicular to another</p>	
<p>10.</p>	<p>All operations. Written methods. partitioning and rearranging the dividend, column, and mental methods.</p>	<p>Knows the properties of place value. Uses number knowledge to add and subtract.</p>	<p>Knows how to calculate with columnar methods regrouping the tens and exchanging in subtraction. Knows how to partition numbers when multiplying in a grid/short method.</p>	<ul style="list-style-type: none"> <li>To recognise the place value of each digit in a 2-digit number (tens, ones).</li> <li>To use place value and number facts to solve problems.</li> <li>Applying their increasing knowledge of mental and written methods.</li> </ul>	<p>To add and subtract numbers with up to three digits, using the efficient written methods of columnar addition and subtraction.</p> <ul style="list-style-type: none"> <li>To estimate the answer to a calculation and use inverse operations to check answers.</li> <li>To write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</li> </ul>
 <p>Additive and base ten properties</p> <p>Columnar addition</p> <p>Columnar subtraction</p> <p>Emphasis on language of place value, i.e. 14 units subtract 6 units, 14 tens subtract 8 tens, and 6 hundreds subtract 2 hundreds.</p> <p>Use the partitioning method, add and subtract with these numbers.</p> <p>18 23 27 22</p> <p>36 + 21 = 57 30 + 20 = 50 6 + 1 = 7 36 - 21 = 15 30 - 20 = 10 6 - 1 = 5</p> <p>Add 42 + 16 31 + 18</p> <p>Subtract 46 - 12 38 - 11</p> <p>48 x 3 = 144 40 x 3 = 120 8 x 3 = 24 120 + 24 = 144</p> <p>48 ÷ 3 = 16 30 ÷ 3 = 10 30 + 18 = 48 30 ÷ 3 = 10 18 ÷ 3 = 6</p> <p>24 x 6 = 144 24 x 6 = 144</p>		 <p>Add 173 to 607 328 519</p> <p>Use this model to calculate 72 x 4 64 x 3</p> <p>35 x 8 40 240 280</p> <p>Subtract these from 435 127 238 276</p>			



Mathematics Medium Term Planning: Spring term Y2/3.

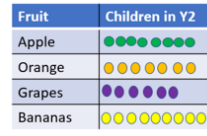
<p>11.</p>	<p>Measurement: time and money.</p>	<p>Knows how to read the time to the 5-minute interval. Knows how to find change in the context of money.</p>	<p>Knows the passing of time can be calculated as time durations.  Knows the correct notation and strategies for calculating with money.</p>	<p>To compare and sequence intervals of time.</p> <ul style="list-style-type: none"> <li>To tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.</li> <li>To recognise and use the symbols for pounds and pence; combine amounts to make a particular value</li> <li>To find different combinations of coins that equal the same amounts of money</li> <li>To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</li> </ul>	<ul style="list-style-type: none"> <li>To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.</li> <li>To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as am/pm, morning, afternoon, noon and midnight.</li> <li>To know the number of seconds in a minute and the number of days in each month, year and leap year.</li> <li>To compare durations of events, for example to calculate the time taken by particular events or tasks</li> </ul>
 <p>Using £ notation and the decimal point</p> $\begin{array}{r} \pounds 678.00 \\ - \pounds 126.00 \\ \hline 752.00 \end{array}$ <p>Lining up the place value.</p> $\begin{array}{r} \pounds 345.00 \\ + \pounds 62.98 \\ \hline 407.98 \end{array}$ <p>Which is the correct notation?</p> $\begin{array}{r} \pounds 567.54\text{p} \\ \pounds 567.54 \end{array}$		  <p>I have £2. I spend £1 so I get £1 change. I spend 50p so I get £1.50 change.</p> <p>I have 20p I spend 14p so I get 6p change. My change could be 2p + 2p + 2p or 5p + 1p</p>		<p>Ben bought the Ultra Ace tennis racket for £124.45. He also bought 12 tennis balls for £32.99. How much did Ben spend altogether?</p>  <p>Ashley leaves her house at sixteen minutes past 4. She walks 10 minutes to the bus stop. What time does she arrive at the bus stop?</p>  <p>Jenny wants to buy this bicycle. It costs £149.99. She has saved up £102.56 so far. How much more does she need to save?</p>	
<p>12.</p>	<p>Statistics: read, present, and interpret tallies, pictograms and tables.</p>	<p>Knows how data is represented and read.</p>	<p>Knows how to interpret and analyse data.</p>	<p>To interpret and construct simple pictograms, tally charts, block diagrams and simple tables. To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. To ask and answer questions about totalling and compare categorical data.</p>	<p>To interpret and present data using bar charts, pictograms and tables.</p> <ul style="list-style-type: none"> <li>To solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.</li> </ul>

# Mathematics Medium Term Planning: Spring term Y2/3.

Fruit	Children in Y2
Apple	8
Orange	7
Grapes	6
Bananas	9

Children in Y2 like fruit.  
How many children like apples?  
How many more children like bananas?

A block graph to show Y2 favourite fruit.

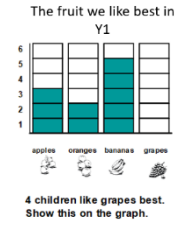


Sports	Children in Y3
Football	8
Tennis	7
Athletics	6
Swimming	9

Children in Y3 like sports.  
How many children are in Y3?  
How many more children like football and tennis than swimming?

Month	Birthdays
January	8
February	4
March	7

How many children have a birthday in February in our class?  
How many more children have their birthday in March?



Complete the pictogram

Month	Bookings	People
June		
July		
August		

Month	Bookings	People
June	8	12
July	12	28
August	20	32

= 4 bookings      = 8 people