




**Year 3 Maths Planning – Autumn 1 (Lessons 1 to 30) – Number system and Calculating**

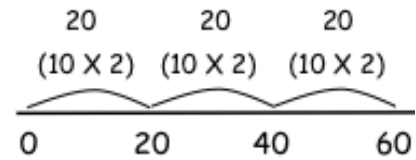
| Week | Day | Mental starter   | Learning objective                                     | Differentiation  | Activity   |
|------|-----|--|--|--|--|
| 1    | Mon | To be able to count back from 100                        | To be able to write numbers in figures and in words    | LA – 2-digit numbers<br>MA – 3-digit numbers<br>HA – 4-digit numbers<br>G+T – 5-digit numbers  | Chn to write numbers given in figures in words e.g. 11 as eleven, and numbers given in words in figures e.g. forty-two as 42 |
|      | Tue | To be able to count in 10s (from zero)                   | To be able to order numbers from lowest to highest     | LA – 2-digit numbers<br>MA – 3-digit numbers<br>HA – 4-digit numbers<br>Ext – negative numbers and numbers with decimal places   | Chn to order a series of sets of 4 numbers from lowest to highest  |
|      | Wed | To be able to count in 100s and 1,000s (from zero)       | To be able to partition numbers                        | LA – 2-digit numbers<br>MA – 3-digit numbers<br>HA – 4-digit numbers<br>Ext – choose own numbers   | Chn to partition a series of numbers<br>e.g. $436 = 400 + 30 + 6$<br>$200 + 50 + 9 = 259$                                    |
|      | Thu | To be able to count in 10s (from any number)             | To be able to partition numbers in a range of ways     | LA – 2-digit numbers<br>MA – 3-digit numbers<br>HA – 4-digit numbers<br>Ext – numbers with decimal places  | Chn to partition each number in 3 different ways   |
|      | Fri | To be able to count in 100s and 1,000s (from any number) | To be able to add and subtract multiples of 10 and 100 | LA – add and subtract multiples of 10<br>MA – add and subtract multiples of 100<br>HA – add and subtract multiples of 1,000<br>G+T – add and subtract tenths, hundredths and thousandths | Chn to mentally add and subtract multiples of 10, 100 or 1,000 e.g. $34 + 30$ , $458 + 200$                                  |

| Week | Day   | Mental starter  | Learning objective   | Differentiation   | Activity  |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|------|---|---|--|---|---|----|---|---|---|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|--|
| 2    | Mon   | To be able to add mentally by partitioning  | To be able to use column addition ( <b>with and without</b> partitioning and <b>no carrying</b> )  | LA – add 1-digit numbers / multiples of 10<br>MA – add 2-digit numbers<br>HA – add 3-digit numbers<br>G+T – add 4-digit numbers and decimals  | Chn to use following layouts:<br><table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td></td><td>4</td><td>0</td><td>+</td><td>3</td><td>1)</td><td></td><td>4</td><td>3</td><td></td></tr> <tr><td>+</td><td>2</td><td>0</td><td>+</td><td>5</td><td></td><td>+</td><td>2</td><td>5</td><td></td></tr> <tr><td></td><td>6</td><td>0</td><td>+</td><td>8</td><td></td><td></td><td>6</td><td>8</td><td></td></tr> </table> |    | 4 | 0 | + | 3  | 1) |   | 4 | 3 |   | + | 2 | 0 | + | 5 |   | + | 2 | 5 |   |   | 6 | 0 | + | 8 |   |  | 6 | 8 |  |
|      |   | 4   | 0  | +   | 3   | 1) |   | 4 | 3 |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      | +   | 2   | 0  | +   | 5   |    | + | 2 | 5 |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      |   | 6   | 0  | +   | 8   |    |   | 6 | 8 |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      | Tue   | To be able to add mentally by partitioning  | To be able to use column addition ( <b>without</b> partitioning and <b>with carrying</b> )   | LA – add 1-digit numbers to 2-digit numbers<br>MA – add 2-digit numbers<br>HA – add 3-digit numbers<br>G+T – add 4-digit numbers and decimals   | Chn to use following layout only:<br><table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>1)</td><td></td><td>4</td><td>3</td><td></td></tr> <tr><td></td><td>+</td><td>2</td><td>5</td><td></td></tr> <tr><td></td><td></td><td>6</td><td>8</td><td></td></tr> </table>   | 1) |   | 4 | 3 |    |    | + | 2 | 5 |   |   |   | 6 | 8 |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
| 1)   |   | 4   | 3  |   |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      | +   | 2   | 5  |   |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      |   | 6   | 8  |   |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
| Wed  | To be able to subtract mentally by partitioning         | To be able to use column subtraction ( <b>with and without</b> partitioning and <b>no borrowing</b> ) | LA – subtract 1-digit numbers / multiples of 10<br>MA – subtract 2-digit numbers<br>HA – subtract 3-digit numbers<br>G+T – subtract 4-digit numbers and decimals | Chn to use following layouts:<br><table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>1)</td><td></td><td>4</td><td>0</td><td>+</td><td>8</td><td>1)</td><td></td><td>4</td><td>8</td></tr> <tr><td></td><td>-</td><td>2</td><td>0</td><td>+</td><td>5</td><td></td><td>-</td><td>2</td><td>5</td></tr> <tr><td></td><td></td><td>2</td><td>0</td><td>+</td><td>3</td><td></td><td></td><td>2</td><td>3</td></tr> </table> | 1)  |    | 4 | 0 | + | 8  | 1) |   | 4 | 8 |   | - | 2 | 0 | + | 5 |   | - | 2 | 5 |   |   | 2 | 0 | + | 3 |   |  | 2 | 3 |  |
| 1)   |   | 4   | 0  | +   | 8   | 1) |   | 4 | 8 |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      | -   | 2   | 0  | +   | 5   |    | - | 2 | 5 |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      |   | 2   | 0  | +   | 3   |    |   | 2 | 3 |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
| Thu  | To be able to subtract mentally by partitioning         | To be able to use column subtraction ( <b>without</b> partitioning and <b>with borrowing</b> )        | LA – subtract 1-digit numbers / multiples of 10<br>MA – subtract 2-digit numbers<br>HA – subtract 3-digit numbers<br>G+T – subtract 4-digit numbers and decimals | Chn to use following layout only:<br><table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>1)</td><td></td><td>4</td><td>8</td><td></td></tr> <tr><td></td><td>-</td><td>2</td><td>5</td><td></td></tr> <tr><td></td><td></td><td>2</td><td>3</td><td></td></tr> </table>   | 1)  |    | 4 | 8 |   |    | -  | 2 | 5 |   |   |   | 2 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
| 1)   |   | 4   | 8  |   |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      | -   | 2   | 5  |   |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      |   | 2   | 3  |   |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
| Fri  | To be able to add and subtract mentally by partitioning | Column addition and subtraction ( <b>without</b> partitioning and <b>with</b> carrying and borrowing) | LA – + & - 1-digit numbers / multiples of 10<br>MA – + & - 2-digit numbers<br>HA – + & - 3-digit numbers<br>G+T – + & - 4-digit numbers and decimals             | Chn to use following layout only:<br><table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>1)</td><td></td><td>4</td><td>3</td><td></td><td>1)</td><td></td><td>4</td><td>8</td></tr> <tr><td></td><td>+</td><td>2</td><td>5</td><td></td><td></td><td>-</td><td>2</td><td>5</td></tr> <tr><td></td><td></td><td>6</td><td>8</td><td></td><td></td><td></td><td>2</td><td>3</td></tr> </table>                              | 1)  |    | 4 | 3 |   | 1) |    | 4 | 8 |   | + | 2 | 5 |   |   | - | 2 | 5 |   |   | 6 | 8 |   |   |   | 2 | 3 |  |   |   |  |
| 1)   |   | 4   | 3  |   | 1)  |    | 4 | 8 |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      | +   | 2   | 5  |   |   | -  | 2 | 5 |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |
|      |   | 6   | 8  |   |   |    | 2 | 3 |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |  |

| Week | Day | Mental starter                              | Learning objective   | Differentiation   | Activity   |
|------|-----|---|--|---|--|
| 3    | Mon | To be able to count in 2s (from zero)       | To understand addition and subtraction as inverses                       | LA – sentences with totals >10<br>MA – sentences with totals >20<br>HA – sentences with totals >100<br>G+T – sentences with totals to 1dp     | Chn to write 3 related number sentences from 1 number sentence e.g. given $5 - 2 = 3$ , derive $3 + 2 = 5$ , $2 + 3 = 5$ and $5 - 3 = 2$ |
|      | Tue | To be able to count in 2s (from any number) | To be able to double and halve numbers<br>To understand them as inverses | LA – double and halve numbers to 10<br>MA – double and halve multiples of 10<br>HA – 1-step inverse problems<br>G+T – 2-step inverse problems | Chn to solve inverse problems e.g. I am double 10. What am I? if you halve me you get 10. What number am I?                              |
|      | Wed | To be able to count in 5s (from zero)       | To understand multiplication as 'jumps of'                               | LA – multiply by 2, 5 and 10<br>MA – multiply by 3, 4 and 6<br>HA – multiply by 7, 8 and 9<br>G+T – multiply by numbers to 1dp                | Chn to understand $3 \times 2$ as 3 'jumps of 2' and use jumps on a number line to calculate a series of multiplications                 |
|      | Thu | To be able to count in 5s (from any number) | To understand division as 'how many jumps of?'                           | LA – divide by 2, 5 and 10<br>MA – divide by 3, 4 and 6<br>HA – divide by 7, 8 and 9<br>G+T – divide by numbers to 1dp                        | Chn to understand $6 \div 2$ as 'how many jumps of 2 to make 6?' and use jumps on a number line to calculate a series of divisions       |
|      | Fri | To be able to count in 3s (from zero)       | To be able to divide with remainders                                     | LA – divide by 2, 5 and 10<br>MA – divide by 3, 4 and 6<br>HA – divide by 7, 8 and 9<br>G+T – express quotients as fractions                  | Chn to calculate divisions with remainders on number lines<br>G+T - express quotients as fractions e.g. $5 \div 2 = 2 \frac{1}{2}$       |

| Week | Day | Mental starter                                | Learning objective  | Differentiation   | Activity   |
|------|-----|---|---|---|--|
| 4    | Mon | To be able to count in 4s (from zero)         | To be able to round remainders up or down depending on context      | LA – divide by 2, 5 & 10 (no rounding)<br>MA – divide by 2, 5 & 10 (w/rounding)<br>HA – divide by 2 to 10 (w/rounding)<br>G+T – derive ratios                                   | Chn to solve rounding up or down remainders problems<br>G+T – to write ratio of one shape to another e.g.    as 2:1 |
|      | Tue | To be able to count in 6s (from zero)         | To understand multiplication as arrays                              | LA – multiply by 2, 3, 4, 5 and 10<br>MA – multiply by 6, 7, 8 and 9<br>G+T – use known facts to calculate with decimal places<br>Ext – make up own arrays                      | Chn to derive 2 multiplication sentences from an array and draw their own arrays to represent multiplication sentences<br>G+T – $3 \times 3 = 9$ , so $3 \times 0.3 = 0.9$   |
|      | Wed | To know addition number bonds                 | To understand division as arrays                                    | LA – divide by 2, 3, 4, 5 and 10<br>MA – divide by 6, 7, 8 and 9<br>G+T – use known facts to calculate with decimal places<br>Ext – make up own arrays                          | Chn to derive 2 division sentences from an array and draw their own arrays to represent division sentences<br>G+T $9 \div 3 = 3$ , so $0.9 \div 0.3 = 3$   |
|      | Thu | To know subtraction number bonds              | To understand multiplication and division as arrays and as inverses | LA – $\times$ & $\div$ by 2, 5 and 10<br>MA – $\times$ & $\div$ by 3, 4 and 6<br>HA – $\times$ & $\div$ by 7, 8 and 9<br>G+T – use known facts to calculate with decimal places | Chn to derive 4 related multiplication and division sentences from an array e.g. $2 \times 4 = 8$ , $4 \times 2 = 8$ , $8 \div 4 = 2$ and $8 \div 2 = 4$   |
|      | Fri | To know addition and subtraction number bonds | To be able to use inverses to check calculations                    | LA – year 2 level calculations<br>MA – year 3 level calculations<br>HA – year 4 level calculations<br>G+T – year 5 level calculations   | Chn to complete calculations (all 4 operations and double / halve) and then use an inverse to check their answer e.g. $40 + 20 = 60$ , $60 - 20 = 40$  |

| Week | Day | Mental starter   | Learning objective   | Differentiation  | Activity  |
|------|-----|--|--|--|---|
| 5    | Mon | To know the various vocabulary used for operations                   | To be able to fill in missing numbers or operations        | LA – level 2 calculations<br>MA – level 3 calculations<br>HA – level 4 calculations<br>G+T – use brackets in calculations                        | Chn to fill in missing part of number sentence e.g. $16 \_ 7 = 23$ or $25 + \_ = 28$<br>G+T – number sentences with brackets e.g. $(4 \times 2) + 2$          |
|      | Tue | To know vocabulary meaning 'find the difference'                     | To be able to multiply and divide by 10 and 100            | LA – multiply and divide by 10 & 100<br>MA – also by 1,000<br>HA – also by 10,000<br>G+T – as HA, but with decimal places                        | Chn to multiply numbers by 10, 100 or 1,000   |
|      | Wed | To be able to 'tell a story' to go with a number sentence            | To be able to multiply by multiples of 10 or 100           | LA – as MA, but on number line<br>MA – multiply by multiples of 10<br>HA – multiply by multiples of 10 or 100<br>G+T – also of 1,000s and to dps | LA – multiply by 20, 30, 40 or 50 on number lines<br>Others to use known facts to calculate unknown ones e.g. $3 \times 2 = 6$ so $3 \times 20 = 60$          |
|      | Thu | To be able to multiply by multiples of 10 or 100 e.g. $20 \times 30$ | To be able to use a grid to multiply 2 and 3-digit numbers | LA – finish semi-completed grids<br>MA – 1-digit times 2-digit<br>HA – 1-digit times 3-digit<br>G+T – 1-digit times numbers with dps             | Chn to use the grid method to multiply 2 and 3-digit numbers. Grids drawn for them for the first 8 questions, then they need to draw the grids for themselves |
|      | Fri | To be able to multiply by multiples of 10 or 100 e.g. $20 \times 30$ | To be able to use a grid to multiply 2 and 3-digit numbers | LA – finish semi-completed grids<br>MA – 1-digit times 2-digit<br>HA – 1-digit times 3-digit<br>G+T – 1-digit times numbers with dps             | Continue with yesterday's lesson so that children can go through corrections and have time to finish<br>Ext – make up own examples                            |

| Week | Day | Mental starter            | Learning objective  | Differentiation  | Activity   |
|------|-----|---------------------------|---|--|--|
| 6    | Mon | To know the 2 times table | To be able to divide 2 and 3-digit numbers                  | <p>LA – basic division on number line</p> <p>MA – divide 2 and 3-digit numbers by 20, 30, 40 and 50</p> <p>HA – as MA, but divide by 2, 3, 4 and 5</p> <p>G+T – as MA, but divide by 6, 7, 8 and 9</p> | <p>Chn to use chunking on number lines</p> <p>e.g. <math>60 \div 2 = 30</math> worked out by</p>          |
|      | Tue | To know the 5 times table | To be able to divide 2 and 3-digit numbers, with remainders | <p>LA – basic division as 'groups of'</p> <p>MA – as day before, but with remainders</p> <p>HA – as day before, but with remainders</p> <p>G+T – as day before, but with remainders</p>                | <p>LA – division as groups of</p> <p>Others to work on corrections from yesterday or move on to dividing more challenging numbers e.g. <math>66 \div 2</math>, including with remainders</p> |
|      | Wed | To know the 3 times table | To be able to identify odd and even numbers and multiples   | <p>LA – identify multiples of 2, 5 or 10, up to 100</p> <p>MA – as LA, but numbers up to 1,000</p> <p>HA – as MA, but also multiples of 3, 4 and 6</p> <p>G+T – find common multiples</p>              | <p>Given a grid of numbers, children need to circle odd, numbers, draw a rectangle around even numbers and underline multiples in different colours</p>                                      |
|      | Thu | To know the 4 times table | To be able to round numbers to the nearest 10, 100 or 1,000 | <p>LA – round 2-digit numbers to the nearest 10</p> <p>MA – round to the nearest 10 or 100</p> <p>HA – as MA, but also to nearest 1,000</p> <p>G+T – round to nearest with decimal places</p>          | <p>Chn given a number and told to round it to the nearest 10, 100, 1,000, tenth, hundredth or thousandth</p>   |
|      | Fri | To know the 6 times table | To be able to investigate mathematical statements           | <p>LA – less challenging statements</p> <p>MA – more challenging statements than LA</p> <p>HA – more challenging statements than MA</p>  | <p>Chn to investigate statements to see if they are true or false e.g. If you add any two odd numbers the answer is always even</p>  |

To access more detailed weekly plans, and every resource needed to teach these lessons, visit

<http://www.saveteacherssundays.com/maths/year-3/107/>

