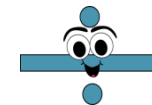


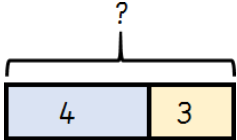
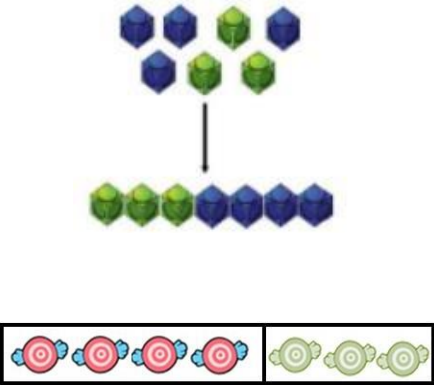
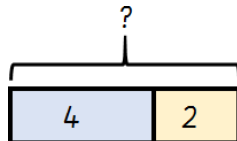
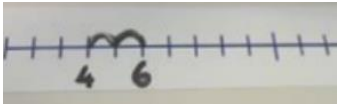
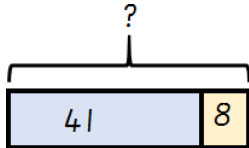
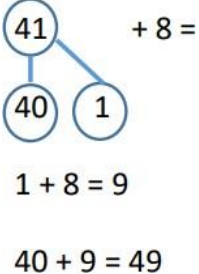


## Calculation Policy 2024-2025



## YEAR GROUP OVERVIEW

|                                                                                                             | Year 1                                                               | Year 2                                                                                                                                          | Year 3                                                                                                       | Year 4                | Year 5                | Year 6                |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|
| <b>Addition</b><br>        | Combining two parts to make a whole.<br><br>Counting on.             | Combining two parts to make a whole.<br><br>Counting on.<br><br>Partitioning to add.                                                            | Partitioning to add.<br><br>Formal written method (no regrouping)<br><br>Formal written method (regrouping)  | Formal written method | Formal written method | Formal written method |
| <b>Subtraction</b><br>     | Taking away from a whole.<br><br>Counting backwards/<br>counting on. | Taking away from a whole.<br><br>Counting backwards/<br>counting on.<br><br>Formal written method (concrete and pictorial only) (no regrouping) | Formal written method (no regrouping)<br><br>Formal written method (regrouping)                              | Formal written method | Formal written method | Formal written method |
| <b>Multiplication</b><br> | Grouping                                                             | Grouping                                                                                                                                        | Partition to multiply<br><br>Formal written method (no regrouping)<br><br>Formal written method (regrouping) | Formal written method | Formal written method | Formal written method |
| <b>Division</b><br>      | Sharing                                                              | Sharing                                                                                                                                         | Partition to divide<br><br>Formal written method                                                             | Formal written method | Formal written method | Long division method  |

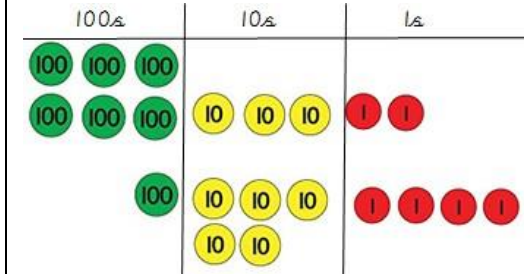
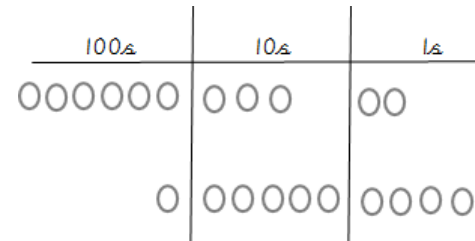
| Addition                                                               | Method                                                                                                                                        | Abstract                                                                                                                                            | Pictorial                                                                                                                                         | Concrete                                                                                                                                                                                           |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key language:</b><br>total, part, whole, altogether plus, add, more | <u>Combining two parts to make a whole</u><br><br>           |                                                                                                                                                     | Children draw the resources using crosses/ dots.<br><br>       | Children use a range of objects (e.g. cubes/ counting teddies/ counters/ numicon/ bead string).<br><br>         |
|                                                                        | <u>Counting on</u><br><br>                                   | Children represent the calculation on a blank number line.<br><br> | Children count on from one number.<br><br>                     | Children use a range of objects to count on (e.g. bead strings/ counters/ cubes/ number lines/ numicon)<br><br> |
|                                                                        | <u>Partitioning to add</u><br>(TO + O and TO + TO)<br><br> |                                                                  | Children represent the base 10/ place value counters<br><br> | Children to use the resources (base 10/ place value counters).<br><br>                                        |

**Formal written method**

No regrouping

$$\begin{array}{r} 632 \\ + 154 \\ \hline \end{array}$$

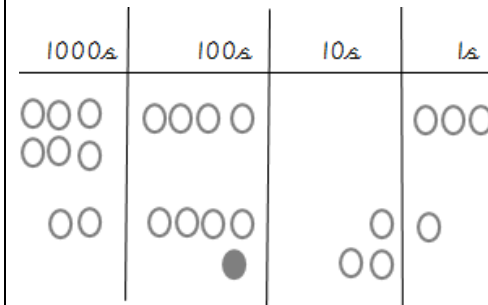
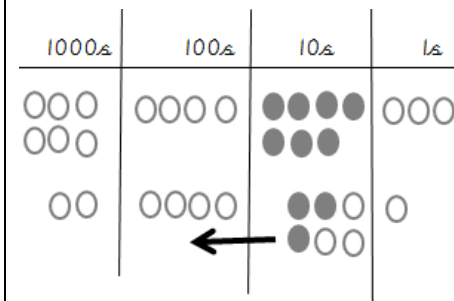
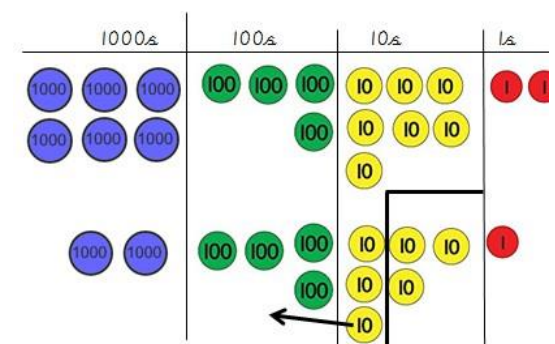
$$\begin{array}{r} 632 \\ + 154 \\ \hline 786 \end{array}$$

Children represent the base 10/  
place value counters**Formal written method**

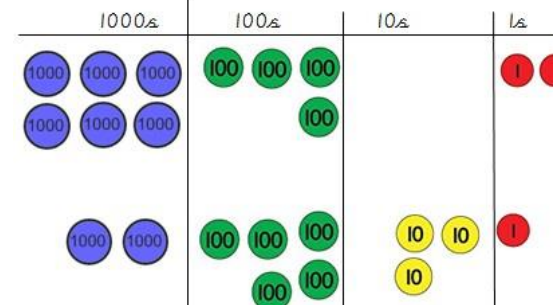
Regrouping

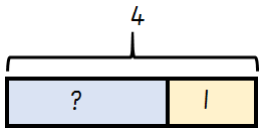
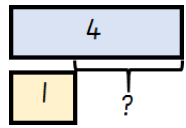
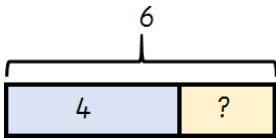
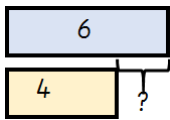
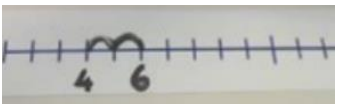
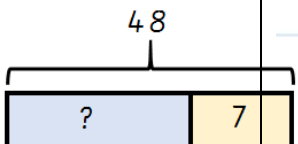
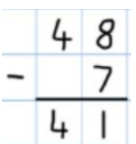
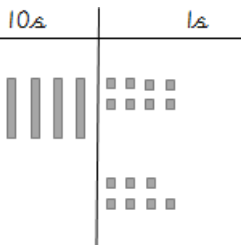
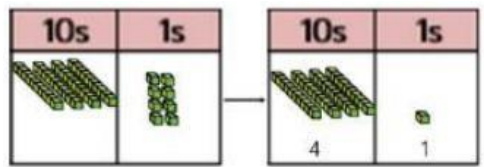
$$\begin{array}{r} 6473 \\ + 2461 \\ \hline \end{array}$$

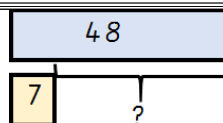
$$\begin{array}{r} 6473 \\ + 2461 \\ \hline 8934 \end{array}$$

Children represent the base 10/  
place value countersChildren need to understand the concept of  
exchanging.

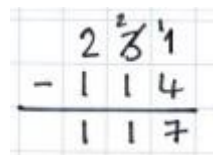
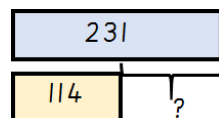
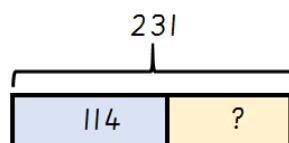
This then becomes:



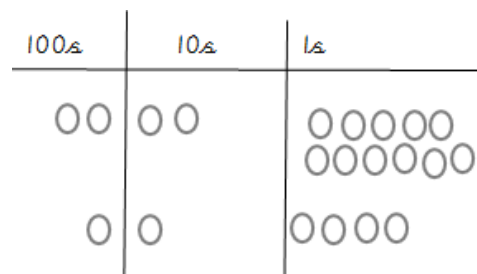
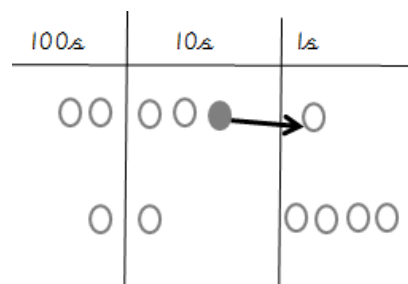
| Subtraction                                                                                                             | Method                                                                                                                                                                                                                   | Abstract                                                                                                                                        | Pictorial                                                                                                                                                                      | Concrete                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key language:</b><br>take away,<br>less than,<br>difference,<br>subtract,<br>minus, more<br>than, fewer,<br>decrease | <b><u>Taking away from a whole</u></b><br><br>         |                                                                                                                                                 | Children draw the resources, using crosses/ dots, and cross them out to take them away.<br> | Children use a range of objects (e.g. cubes/ counting teddies/ counters/ numicon/ bead string).<br>                                                                                              |
|                                                                                                                         | <b><u>Counting backwards/ counting on</u></b><br><br> | Children represent the calculation on a blank number line.<br> | Children represent the resources alongside a number line.<br>                               | Children use a range of objects (e.g. bead strings/ counters/ cubes/ number lines/ numicon) to count.<br><br> |
|                                                                                                                         | <b><u>Formal written method</u></b><br>No regrouping<br>                                                                              |                                                              | Children represent the base 10/ place value counters<br>                                  | Children to use the resources (base 10/ place value counters).<br>                                                                                                                             |



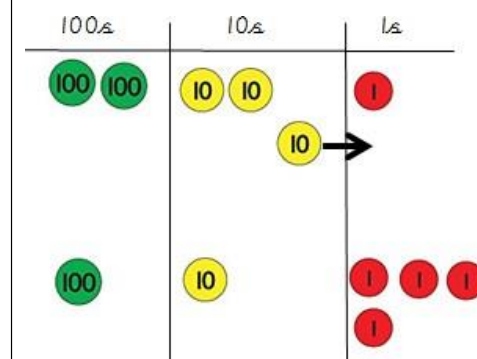
**Formal written method**  
Regrouping



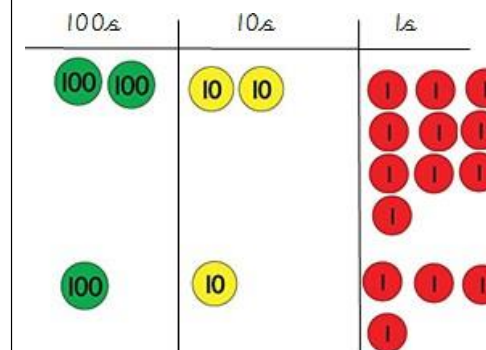
Children represent the base 10/ place value counters

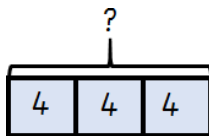
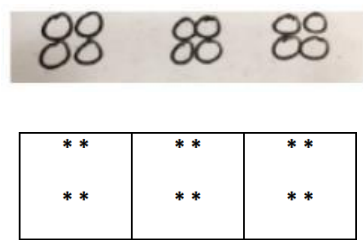
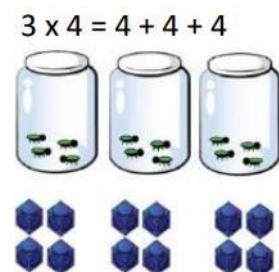
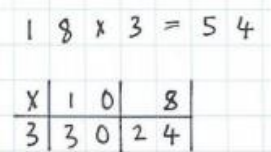
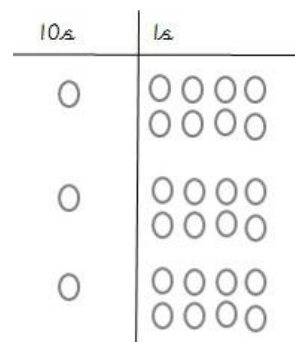
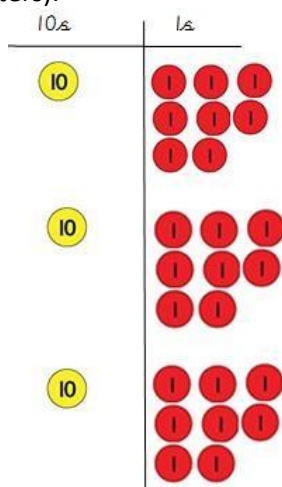


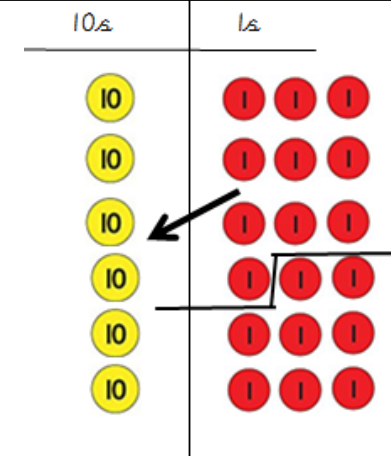
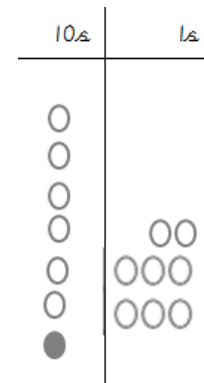
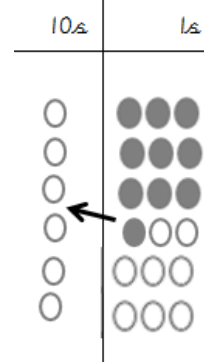
Children need to understand the concept of carrying.



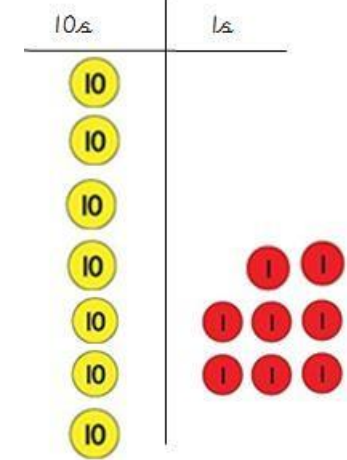
This then becomes:

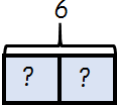
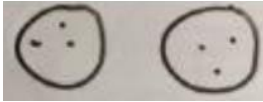
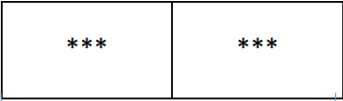
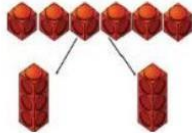
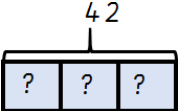
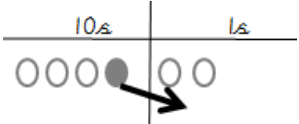
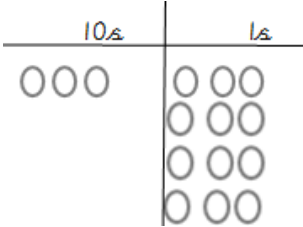
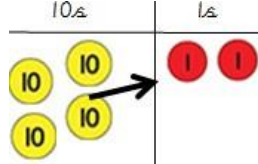
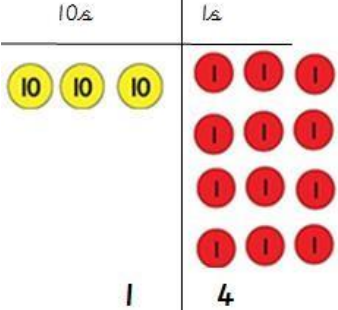


| Multiplication                                                                                              | Method                                                                                                                                                                      | Abstract                                                                                                                                        | Pictorial                                                                                                                                                 | Concrete                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key language:<br>double, times,<br>multiplied by, the<br>product of,<br>groups of, lots of,<br>equal groups | Grouping<br>                                                                               |                                                                                                                                                 | Children draw the resources using crosses/<br>dots/ arrays.<br>        | Children use a range of objects (e.g. cubes/<br>counting teddies/ counters/ numicon/ bead<br>string).<br>$3 \times 4 = 4 + 4 + 4$<br> |
|                                                                                                             | Children link in their developing knowledge of multiplication facts, and use these to calculate mentally.                                                                   |                                                                                                                                                 |                                                                                                                                                           |                                                                                                                                                                                                                          |
|                                                                                                             | Partition to multiply<br>                                                                  | Children represent the base 10/ place<br>value counters.<br> | Children to use the resources (base 10/ place<br>value counters).<br> |                                                                                                                                                                                                                          |
|                                                                                                             | Formal written<br>method<br>No regrouping<br>$\begin{array}{r} 3 \times 23 \\ 20 \quad 3 \\ \times \quad 3 \\ \hline 69 \end{array}$ $3 \times 3 = 9$<br>$3 \times 20 = 60$ | Children represent the base 10/ place<br>value counters.                                                                                        | Children build on their understanding of<br>grouping.                                                                                                     |                                                                                                                                                                                                                          |
|                                                                                                             | Formal written<br>method<br>Regrouping<br>$\begin{array}{r} 23 \\ \times 6 \\ \hline 138 \\ 11 \end{array}$                                                                 |                                                                                                                                                 |                                                                                                                                                           |                                                                                                                                                                                                                          |



This then becomes:



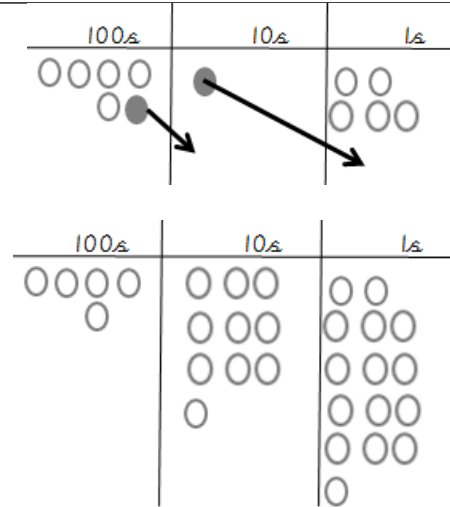
| Division                                                 | Method                                                                                                          | Abstract                                                                                 | Pictoria                                                                                                                                                                                                                             | Concrete                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key language:</b><br>share,<br>group,<br>divide, half | <b>Sharing</b><br>             |                                                                                          | Children draw the resources using crosses/ dots.<br><br>       | Children use a range of objects (e.g. cubes/ counting teddies/ counters/ numicon/ bead string).<br><br> |
|                                                          | Children link in their developing knowledge of multiplication facts, and use these to calculate mentally.       |                                                                                          |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                               |
|                                                          | <b>Partition to divide</b><br> | $42 = 30 + 12$<br><br>$30 \div 3 = 10$<br><br>$12 \div 3 = 4$<br><br>So $42 \div 3 = 14$ | Children represent the base 10/ place value counters.<br><br> | Children to use the resources (base 10/ place value counters).<br><br>This then becomes:<br>           |

### Formal written method

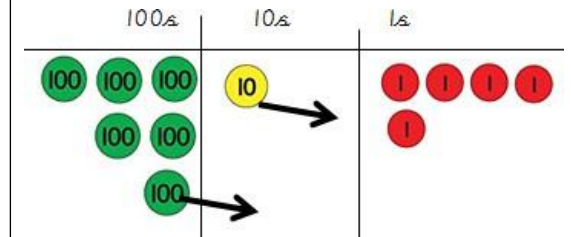
Short division

|     |   |   |   |   |
|-----|---|---|---|---|
| 615 |   |   |   |   |
| ?   | ? | ? | ? | ? |

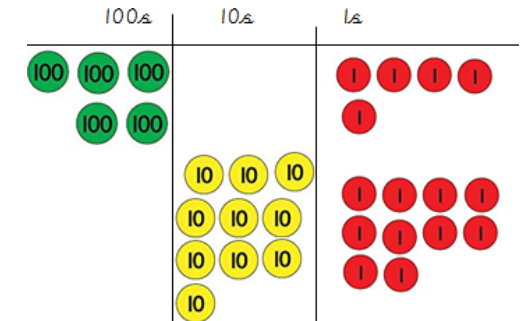
$$5 \overline{) 615} \begin{matrix} 123 \\ 1 \quad 1 \end{matrix}$$



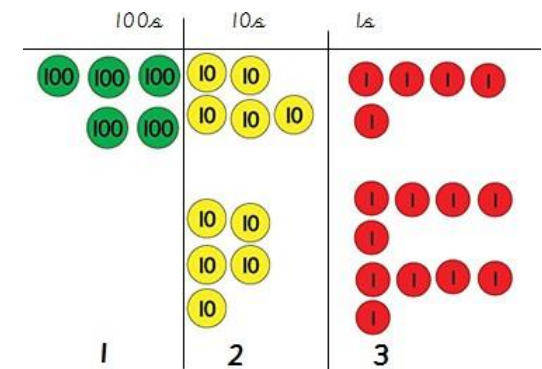
Children to use the resources.



This then becomes:



The children can see how many groups they have:



### Formal written method

Long division

|   |   |   |   |   |
|---|---|---|---|---|
|   |   |   | 2 | 3 |
| 1 | 9 | 4 | 3 | 7 |
|   |   | 3 | 8 | ↓ |
|   |   | 0 | 5 | 7 |
|   |   |   | 5 | 7 |
|   |   |   | 0 | 0 |

