Key Stage 2 – Addition

Y3

- Continue with partitioned columnar method.
- Introduce expanded columnar addition.

	H	T	O
	2	3	6
+		7	3
			9
	1	0	0
	2	0	0
	3	0	9

Progressing to the compact columnar method.

T O 2 3 + 4 2 6 5	H T O 3 1 5 + 6 2 4 9 3 9	T O 9 4 + 7 3 1 6 7	H T O 5 6 1 + 7 1 8 1 2 7 9	T O 4 7 + 2 5 7 2 1	H T O 2 3 7 + 5 1 6 7 5 3 1

- Add money using both £ and pence in practical contexts.

Video clip:
Demonstration of expanded 3 digit columnar addition

National Curriculum requirements:
Add numbers with up to 3 digits, using the formal written method of columnar addition.

Key Stage 2 – Subtraction

Y3

- Continue with vertical number line subtraction progressing to the expanded columnar subtraction method.

89–35 = 54

$$\begin{array}{r} 80 + 9 \\ -\ 30 + 5 \\ \hline 50 + 4 \end{array} = \mathbf{54}$$

- Introduce exchanging through the expanded columnar subtraction method.

$$\begin{array}{r} 60 + {}^{1}2 \\ -\ 40 + 7 \\ \hline 20 + 5 \end{array} = \mathbf{25}$$

- Pro umnar subtraction.

T O	H T O	T O
4 7 - 2 3 2 4	8 6 4 - 6 2 1 2 4 3	$^{4}\cancel{5}^{1}1$ - 3 6 1 5

- Emphasise value of digit, e.g. 4 tens subtract 2 tens = 2 tens. Use the correct language for subtraction i.e. exchange rather than borrow.
- Subtract amounts of money to give change.

Video clips:
Subtraction - teaching children to consider the most appropriate methods before calculating

Introducing partitioned column subtraction method, from practical to written

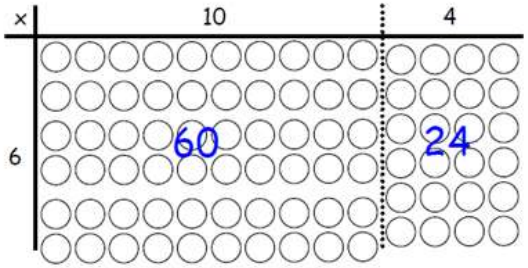
National Curriculum requirements:
Subtract numbers with up to 3 digits using the formal written method of columnar subtraction.

Key Stage 2 – Multiplication

Y3

- Recall and use multiplication tables for 3, 4 and 8.
- Continue to use arrays and number lines/Cuisenaire rods for 3, 4 and 8 multiplication tables.
- Write and calculate mathematical statements for multiplication. Statements to include the multiplication tables that they know and 2 digit numbers x 1 digit numbers. Pupils use mental methods and progress to formal written methods.
- Introduce grid model.

X	10	4
6	60 + 24	= 84



- Progressing to expanded method of multiplication.

```
  T O
  1 4
x   5
  2 0  (5x4)
+ 5 0  (5x10)
  7 0
```

Video clips: [Teaching the grid method as an interim step]
(Partitioning and counters to introduce grid).

National Curriculum requirements: Multiply 2 digits by 1 digit, using mental and progressing to formal written methods.

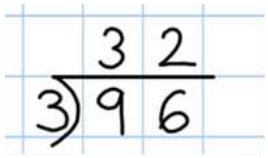
Key Stage 2 – Division

Y3

- Recall and use division facts for 3, 4, and 8 times tables.
- Continue with repeated subtraction on a vertical number line.
- Write and calculate mathematical statements for division using the tables they know.
- Introduce grouping method before short division, encourage children to estimate answers before attempting calculation. Create fact box to encourage efficient grouping e.g. not always groups of 10 - 1x, 2x, 5x, 10x, 20x, 50x, 100x.

```
  13
5) 65
 - 50   (5 x 10)
  15
 - 15   (5 x 3)
   0
```

- Introduce short division, with exact answers.



- Progressing to short division involving carrying, with exact answers.

National Curriculum requirements:
Division questions based on multiplication tables they know.

Divide 2 digits by 1 digit, progressing to formal written methods.

The National Curriculum statutory requirements for Year 3 and the use of written methods are not clear therefore our guidance for Year 3 has been based on the skills required to access Year 4 statutory requirements.

Calculation: Fractions

Year3
Add and subtract fractions with the same denominator within one whole E.g. 5/7 + 1/7 = 6/7