YEAR 3 – Maths Curriculum

Number- Number and Place Value

- count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
- recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- compare and order numbers up to 1000
- identify, represent and estimate numbers using different representations
- read and write numbers up to 1000 in numerals and in words
- solve number problems and practical problems involving these ideas.

Number- Addition and Subtraction

- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
- add and subtract numbers mentally, including:
  - a three-digit number and ones
  - a three-digit number and tens
  - a three-digit number and hundreds
- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation and use inverse operations to check answers

Number- Multiplication and Division

- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- 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
- solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Number- Fractions

- count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- recognise and show, using diagrams, equivalent fractions with small denominators
- add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$)
- compare and order unit fractions, and fractions with the same denominators
- solve problems that involve all of the above.

Measurement

- measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- measure the perimeter of simple 2-D shapes
- add and subtract amounts of money to give change, using both £ and p in practical contexts
- tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
- estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight
- know the number of seconds in a minute and the number of days in each month, year and leap year
- compare durations of events [for example to calculate the time taken by particular events or tasks].

Geometry - Properties of shapes

- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- recognise angles as a property of shape or a description of a turn
- 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
- identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

. Statistics

- interpret and present data using bar charts, pictograms and tables
- solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

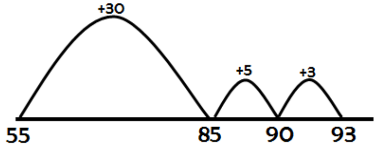
Vocabulary

Estimate, inverse, digit, mental method, written method, scaling, fraction, numerator, denominator, equivalent, standard unit, perimeter, volume/capacity, metres, millimetres, centimetres, analogue, digital, roman numerals, numerals, a.m., p.m., angle, turn, right angle, half turn, quarter turn, greater than, less than, horizontal, vertical, perpendicular, parallel

Addition and Subtraction – Year 3

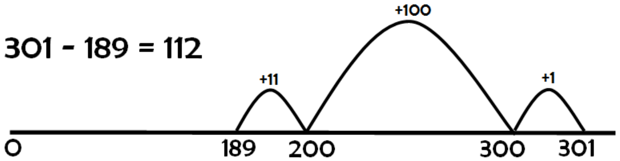
- **Addition- Number line (supporting mental addition)**

55+38=93 (using bridging and combined multiples of 10)



- **Subtraction – Number line (counting up / finding the difference)**

301 – 189 = 112



- **Column Addition and Subtraction** (using Base 10 apparatus to support understanding)
- Children should be confident using a number line before moving to column examples.

```
 288
+166
  14
 140
 300
 454
```

```
  300
  400  150   7
- 200   60   5
  100   90   2
```

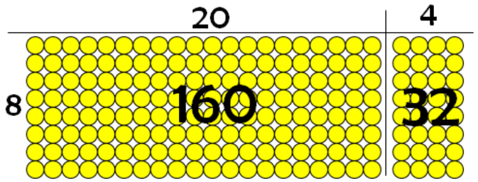
```
   3 15
   245
 - 127
   118
```

- See Year 2 and Year 4 examples for lower and higher ability pupils, if appropriate.

Multiplication and Division – Year 3

- **Multiplication – Grid Method**

24 x 8 = 192



x	50	4
6	300	24

```
  300
+  24
  324
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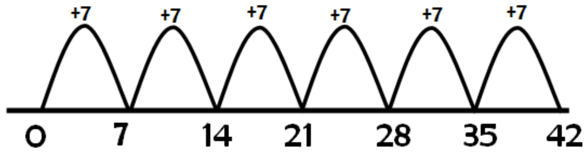
- **Division – Number Line**

42 ÷ 7 = 6

6 groups of 7 is 42
6x7 =42



Mental Maths Coverage

- Count in multiples of 4, 8 and 100
- *Count forward and backwards in 1s, 10s and 100s confidently, and tenths.*
- Recall multiplication and division facts for the 3, 4 and 8 multiplication tables (including 2, 5 and 10 multiplication table – from Year 2)
- *Derive related facts when multiplying (6x3=18 60x3=180)*
- Find 10 or 100 more or less than a given number
- Add and subtract a three digit number and ones mentally (using bridging through 10)
- Add and subtract a three digit number and tens (using addition and subtraction facts)
- Add and subtract a thee digit number and hundreds (using understanding of place value)
- *Know addition and subtraction facts for multiples of 10 up to 100 (e.g. 40+30=70 90-40=50)*
- *Know pairs of numbers that total 100 (e.g. 39+61).*
- *Know addition doubles for multiples of 10 up to 100+100 (90+90, 70+70) and doubles to 20+20 (18+18=36)*
- *Add two 2-digit numbers mentally (45+34=)*

Resources

- **Fraction Circles** – adding and subtracting common denominator fractions; comparing and ordering fractions; counting in tenths

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- **Bead string** – pairs of numbers that total 100

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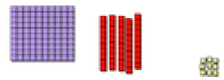
- **Base 10 apparatus** – partitioning; recombining; counting forwards and backwards in 10s and 100s;



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- **Place Value Arrow cards** (partitioning and recombining three digit numbers)

- **Number lines** (including tenths and fraction number lines)
- **3D shapes**
- **2D shapes**