

## 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.

### 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].

### 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

### 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.

### 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.

### 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.

### 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.  $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ )
- compare and order unit fractions, and fractions with the same denominators
- solve problems that involve all of the above.

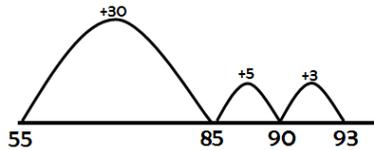
### Vocabulary

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

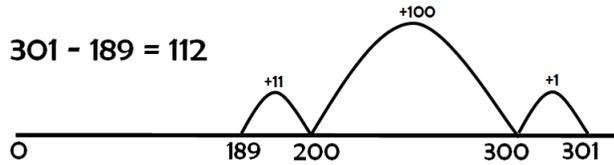
### • Addition- Number line (supporting mental addition)

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.

$$\begin{array}{r} 288 \\ +166 \\ \hline 14 \\ 140 \\ 300 \\ \hline 454 \end{array}$$

$$\begin{array}{r} 300 \\ -200 \\ \hline 100 \end{array} \quad \begin{array}{r} 150 \\ -60 \\ \hline 90 \end{array} \quad \begin{array}{r} 7 \\ -5 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 315 \\ -127 \\ \hline 188 \end{array}$$

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

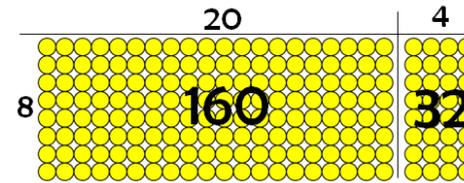
## Mental Maths Coverage

- 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 ( $6 \times 3 = 18$   $60 \times 3 = 180$ )
- 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 three 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 ( $45+34=$ )

## Multiplication and Division - Year 3

### • Multiplication - Grid Method

$$24 \times 8 = 192$$



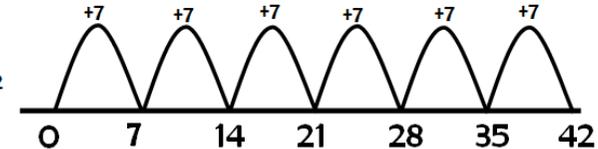
x	50	4
6	300	24

$$\begin{array}{r} 300 \\ + 24 \\ \hline 324 \end{array}$$

### • Division - Number Line

$$42 \div 7 = 6$$

6 groups of 7 is 42  
 $6 \times 7 = 42$



## Resources

- Fraction Circles - adding and subtracting common denominator fractions; comparing and ordering fractions; counting in tenths
- Bead string - pairs of numbers that total 100
- Base 10 apparatus - partitioning; recombining; counting forwards and backwards in 10s and 100s;
- Place Value Arrow cards (partitioning and recombining three digit numbers)
- Number lines (including tenths and fraction number lines)
- 3D shapes
- 2D shapes

