

# Mathematics Curriculum Year 3 Yearly Overview

## Autumn 1

<b>Number Sense</b>	<ul style="list-style-type: none"> <li>• count from 0 in multiples of 100; find 10 or 100 more or less than a given number</li> <li>• recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>• compare and order numbers up to 1000</li> <li>• identify, represent and estimate numbers using different representations</li> <li>• read and write numbers to at least 1000 in numerals and in words</li> </ul> <p>solve number problems and practical problems involving these ideas</p>
<b>Additive Reasoning</b>	<ul style="list-style-type: none"> <li>• add and subtract numbers mentally, including:               <ul style="list-style-type: none"> <li>› a three-digit number and ones</li> <li>› a three-digit number and tens</li> <li>› a three-digit number and hundreds</li> </ul> </li> <li>• add and subtract numbers with up to three digits</li> <li>• estimate the answer to a calculation and use inverse operations to check answers</li> <li>• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> <li>• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>• add and subtract amounts of money to give change, using both £ and p in practical contexts</li> <li>• interpret and present data using bar charts, pictograms and tables</li> <li>• 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</li> </ul>
<b>Multiplicative Reasoning</b>	<ul style="list-style-type: none"> <li>• count from 0 in multiples of 4, 8, 50 and 100</li> <li>• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know</li> <li>• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects</li> </ul>

## Autumn 2

<b>Number Sense</b>	<ul style="list-style-type: none"> <li>• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</li> <li>• recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>• compare and order numbers up to 1000</li> <li>• identify, represent and estimate numbers using different representations</li> <li>• read and write numbers up to 1000 in numerals and in words</li> <li>• solve number problems and practical problems involving these ideas</li> <li>• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>• 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</li> </ul>
<b>Multiplicative Reasoning</b>	<ul style="list-style-type: none"> <li>• add and subtract numbers mentally, including:               <ul style="list-style-type: none"> <li>› a three-digit number and ones</li> <li>› a three-digit number and tens</li> <li>› a three-digit number and hundreds</li> </ul> </li> <li>• add and subtract numbers with up to three digits</li> <li>• estimate the answer to a calculation and use inverse operations to check answers</li> <li>• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> <li>• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>• add and subtract amounts of money to give change, using both £ and p in practical contexts</li> <li>• interpret and present data using bar charts, pictograms and tables</li> <li>• 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</li> </ul>
<b>Geometric Reasoning</b>	<ul style="list-style-type: none"> <li>• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>• recognise that angles are a property of shape or a description of a turn</li> <li>• 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.</li> </ul>

# Mathematics Curriculum Year 3 Yearly Overview

## Spring 1

### Number Sense

- identify, represent and estimate numbers using different representations
- 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 and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- add and subtract fractions with the same denominator within one whole [for example,  $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ ]
- compare and order unit fractions with the same denominator
- solve problems that involve all of the above

### Multiplicative Reasoning

- count from 0 in multiples of 4, 8, 50 and 100
- 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
- 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
- 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
- solve problems that involve all of the above

## Spring 2

### Number Sense

- 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
- 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]
- interpret and present data using bar charts, pictograms and tables

### Additive Reasoning

- 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
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
- measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- add and subtract amounts of money to give change, using both £ and p in practical contexts
- 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]
- 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

## Summer 1

# Mathematics Curriculum Year 3 Yearly Overview

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Number Sense</b></p>	<ul style="list-style-type: none"> <li>• identify, represent and estimate numbers using different representations</li> <li>• 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</li> <li>• recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</li> <li>• recognise and show, using diagrams, equivalent fractions with small denominators</li> <li>• add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>]</li> <li>• compare and order unit fractions and fractions with the same denominator</li> </ul> <p>solve problems that involve all of the above</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Multiplicative Reasoning</b></p>	<ul style="list-style-type: none"> <li>• count from 0 in multiples of 4, 8, 50 and 100</li> <li>• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>• 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</li> <li>• solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects</li> <li>• 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</li> <li>• recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>• solve problems that involve all of the above</li> <li>• know the number of seconds in a minute and the number of days in each month, year and leap year</li> </ul>
<p><b>Summer 2</b></p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Geometric Reasoning</b></p>	<ul style="list-style-type: none"> <li>• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>• recognise that angles are a property of shape or a description of a turn</li> <li>• 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</li> </ul> <p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Geometric Reasoning</b></p>	<ul style="list-style-type: none"> <li>• recognise that angles are a property of shape or a description of a turn</li> <li>• 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</li> <li>• identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> </ul> <p>measure the perimeter of simple 2-D shapes</p>