**Gothic Mede Academy**

**Year 3 Mathematics Overview**

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| **Term** | **Strand**  | **National Curriculum 2014 Objectives** | **Focus** | **Small Step** | **Ready to progress criteria (June 2020)** |
| Autumn 1 | Number: 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 (100s, 10, 1s)
* 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
 | Place value | * Hundreds
* Represent numbers to 1,000
* 100s, 10s and 1s (1)
* 100s, 10s and 1s (2)
* Number line to 1,000
* Find 1, 10, 100 more or less than a given number
* Compare objects to 1,000
* Compare numbers to 1,000
* Order numbers
* Count in 50s
 | * NPV-1, NPV-2
* NPV-2
* NPV-2
* NPV-2
* NPV-4
* NPV-3
* NPV-3
* NPV-3
* NPV-3
* NPV-4
 |
| Autumn 1/Autumn 2 | Number: 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 the formal method 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
 | Addition and subtraction | * Add and subtract multiples of 100
* Add and subtract 3-digit and 1-digit numbers – not crossing 10
* Add 3-digit and 1-digit numbers – crossing 10
* Subtract a 1-digit number from a 3-digit number – crossing 10
* Add and subtract 3-digit and 2-digit numbers – not crossing 100
* Add 3-digit and 2-digit numbers – crossing 100
* Subtract a 2-digit number from a 3-digit number – crossing 100
* Add and subtract 100s
* Spot the pattern – make it explicit
* Add and subtract a 2-digit number 3-digit numbers – not crossing 10 or 100
* Add a 2-digit and 3-digit numbers – crossing 10 or 100
* Subtract a 2-digit number from a 3-digit number – crossing 10 or 100
* Add two 3-digit numbers – not crossing 10 or 100
* Add two 3-digit numbers – crossing 10 or 100
* Subtract a 3-digit number from a 3-digit number – no exchange
* Subtract a 3-digit number from a 3-digit number – exchange
* Estimate answers to calculations
* Check answers
 | * AS-2
* AS-2
* AS-2
* AS-2
* AS-2
* AS-2
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* AS-2
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* AS-2
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* AS-2
* AS-2
* AS-2
* AS-2
* AS-3
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| Autumn 2 | Number – multiplication and division | * **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, 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
 | Multiplication and division | * Multiplication – equal groups
* Multiply by 3
* Divide by 3
* The 3 times table
* Multiply by 4
* Divide by 4
* The 4 times table
* Multiply by 8
* Divide by 8
* The 8 times table
 | * MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
 |
| Spring 1 | 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
 | Multiplication and division | * Comparing statements
* Related calculations
* Multiply 2-digits by 1-digit (1)
* Multiply 2-digits by 1-digit (2)
* Divide 2-digits by 1-digit (1)
* Divide 2-digits by 1-digit (2)
* Divide 100 into 2,4,5 and 10 equal parts
* Divide with remainders
* Divide 2-digits by 1-digit (3)
* Scaling
* How many ways?
 | * MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
* MD-1
 |
| Spring 1 | Measurement: money | * Add and subtract amounts of money to give change, using both £ and p in practical contexts
 | Money | * Pounds and pence
* Convert pounds and pence
* Add money
* Subtract money
* Give change
 | * NPV-2
* AS-2
* AS-2
* AS-2
 |
| Spring 1 | Statistics | * Interpret and present data using bar charts, pictograms and tables
* Solve one-step and two-step questions e.g. 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables
 | Statistics | * Pictograms
* Bar charts
* Tables
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| Spring 2 | Measurement: length and perimeter | * **Measure, compare, add and subtract: lengths (m/cm/mm);** mass (kg/g); volume/capacity (l/ml)
* Measure the perimeter of simple 2-D shapes
 | Length and perimeter | * Measure length
* Equivalent lengths – m & cm
* Equivalent lengths – mm & cm
* Compare lengths
* Add lengths
* Subtract lengths
* What is perimeter?
* Measure perimeter
* Calculate perimeter
 | * NPV-2
* NPV-2
* NPV-3
* AS-2
* AS-2
* AS-2
* AS-2
* AS-2
 |
| Spring 2 | 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
* Solve fraction problems that involve all of the above.
 | Fractions | * Making the whole
* Tenths
* Count in tenths
* Tenths as decimals
* Fractions on a number line
* Fractions of a set of objects (1)
* Fractions of a set of objects (2)
* Fractions of a set of objects (3)
 | * F-3
* F-3
* F-3
* F-3
* F-3
* F-2
* F-2
* F-2
 |
| Summer 1 | Number – fractions | * 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 fraction problems that involve all of the above.
 | Fractions | * Equivalent fractions (1)
* Equivalent fractions (2)
* Equivalent fractions (3)
* Compare fractions
* Order fractions
* Add fractions
* Subtract fractions
 | * F-1
* F-1
* F-1
* F-3
* F-3
* F-4
* F-4
 |
| Summer 1 | Measurement: time | * 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 e.g. to calculate the time taken by particular events or tasks
 | Time | * Months and years
* Hours in a day
* Telling the time to 5 minutes
* Telling the time to the minute
* Using a.m. and p.m.
* 24-hour clock
* Finding the duration
* Comparing durations
* Start and end times
* Measuring time in seconds
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| Summer 2 | Geometry: properties of shape | * 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
 | Shape | * Turns and angles
* Right angles in shapes
* Compare angles
* Draw accurately
* Horizontal and vertical
* Parallel and perpendicular
* Recognise and describe 2-D shapes
* Recognise and describe 3-D shapes
* Make 3-D shapes
 | * G-1
* G-1
* G-1
* G-2
* G-2
* G-2
* G-2
* G-2
* G-2
 |
| Summer 2 | Measurement: mass and capacity | * **Measure, compare, add and subtract:** lengths (m/cm/mm); **mass (kg/g); volume/capacity (l/ml)**
 | Mass and capacity | * Measure mass (1)
* Measure mass (2)
* Compare mass
* Add and subtract mass
* Measure capacity (1)
* Measure capacity (2)
* Compare capacity
* Add and subtract capacity
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