**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 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-2 * AS-3 |
| 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 |  |
| 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. + = * 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 |  |
| 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 |  |