MATHEMATICS
MEDIUM TERM PLAN – Y3

Concept	National Curriculum Objectives	Key Skills	Concrete Resources	Vocabulary
Number **Place Value** (Autumn Term)	• 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.	• Represent numbers to 100 • Partition numbers to 100 • Number line to 100 • Hundreds • Represent numbers to 1000 • Partition numbers to 1000 • Flexible partitioning of numbers to 1000 • Hundreds, tens, ones	• Numicon • Diennes/Base 10 • Place value counters • Place value charts • Straws • Tens Frames & 2 sided counters • Bead Strings • Concrete objects for counting/ordering • Number lines	Ones, tens, hundreds, thousands, digits, place value, represent, greater than ,less than, more, less, equal to, compare, larger, forwards, backwards, partition
Number **Addition and Subtraction** (Autumn Term)	• add and subtract numbers mentally, including: • 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.	• Apply number bonds within 10 • Add and subtract 1s • Add and subtract 10s • Add and subtract 100s • Spot the pattern • Add 1s across a 10 • Add 10s across a 100 • Subtracts 1s across a 10 • Subtract 10s across a 100 • Make connections	• Numicon • Diennes/Base 10 • Straws • Tens Frames & 2 sided counters • Place value counters • Bead Strings • Number lines • Concrete objects to manipulate when adding/subtracting • Interlocking Cubes • Digit cards (moving to abstract)	Addition, add, more, and, total, altogether, double, near double, half, halve, subtract, takeaway, how many are left?, fewer, difference between, equals, is the same as, number bonds/pairs/facts, missing number, tens boundary, hundreds boundary

		• Add two numbers (across a 10) • Add two numbers (across 100) • Add 2-digit and 3-digit numbers • Complements to 100 • Estimate answers • Inverse operations • Make decisions		
Number **Multiplication and Division (1)** (Autumn Term)	• 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 – equal groups • Use arrays • Multiples of 2 • Multiples of 5 and 10 • Sharing and grouping • 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 • The 2, 4 and 8 times tables	• Counters • Objects for grouping • String beads • Numicon • Times table squares • Place value charts	Multiplication, multiply, multiplied by, multiple, factor, groups of, times, product, array, rows, columns, repeated addition, division, dividing, divided into, left over, remainder, grouping, sharing, sharing equally, equal groups of, doubling, halving, number patterns, multiplication table, multiplication fact, division fact
Number **Multiplication and Division (2)** (Spring Term)	• 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.	• Comparing statements • Related calculations • Multiply 2-digits by 1-digit • Multiply 2-digits by 1-digit (explore multiplication with exchange) • Divide 2-digits by 1 digit • Divide 2-digits by 1 digit (solve problems with remainders) • Scaling • How many ways?		

Measurement **Length and Perimeter** (Spring Term)	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • measure the perimeter of simple 2-D shapes	• Measure length • Measure length (m) • Equivalent lengths - m and cm • Equivalent lengths - mm and cm • Compare lengths • Add lengths • Subtract lengths • Measure perimeter • Calculate perimeter	• Rulers • Objects to measure • Interlocking cubes • 2-D shapes	Millilitre, centimetre, metre, kilometre, length, height, width, long, short, tall, high, low, wide, narrow, thick, thin, longer, shorter, taller, higher, longest, shortest, tallest, highest, far, furthest, near, close distance apart, perimeter, ruler, metre stick, tape measure
Number **Fractions (1)** (Spring Term)	• 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 [for example, $^5/_7 + {}^1/_7 = {}^6/_7$] • compare and order unit fractions, and fractions with the same denominator • solve problems that involve all of the above.	• Make equal parts • Recognise a half • Find a half • Recognise a quarter • Find a quarter • Recognise a third • Find a third • Unit fractions • Non-unit fractions • Equivalence of 1/2 and 2/4 • Count in fractions	• Interlocking cubes • Counters • Numicon and peg boards • Range of objects to share into equal groups • Cuisenaire rods	Fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths
Measurement **Mass and Capacity** (Spring Term)	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	• Compare mass • Measure mass • Add and subtract mass • Compare volume • Measure capacity • Compare capacity • Add and subtract capacity • Temperature	Range of measuring equipment: • Balancing scales • Weighing scales • Containers • Weights • Thermometer	Kilogram, half kilogram, gram, weigh, weighs, balances heavy, light , heavier than, lighter than, heaviest, lightest, scales, litre, half litre, millilitre, capacity, volume, full, empty, more than, less than, half full, quarter full, holds, contains, measure, measurement, size, compare, measuring scale, estimate

Number **Fractions (2)** (Summer Term)	• 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 [for example, $^5/_7 + {}^1/_7 = {}^6/_7$] • compare and order unit fractions, and fractions with the same denominator • solve problems that involve all of the above.	• Making the whole • Tenths • Count in tenths • Tenths as decimals • Fractions on a number line • Fractions of a set of objects • Equivalent fractions • Compare fractions • Order fractions • Add fractions • Subtract fractions	• Interlocking cubes • Counters • Numicon and peg boards • Range of objects to share into equal groups	Fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths
Measurement **Money** (Summer Term)	• add and subtract amounts of money to give change, using both £ and p in practical contexts	• Count money (pound & pence) • Pounds and pence • Convert pounds and pence • Add money • Subtract money • Give change	• Money – coins, notes • Money vocabulary word mats	money, coin, penny, pence, pound, price, cost, buy, bought, sell, sold, spend, spent, pay, change, dear, costs more, cheap, costs less, cheaper, how much…? , how many…? total
Measurement **Time** (Summer Term)	• 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].	• O'clock and half past • Quarter past and quarter to • 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	• Class clocks • Stopwatches • Timers • Interactive clocks • 24 hour clock • 12 hour clock	Time, days of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday months of the year: January, February, March, April, May, June, July, August, September, October, November, December, Seasons: Spring, Summer, Autumn, Winter, day, week, weekend, fortnight, month, year, century, morning, afternoon, evening, night, today, yesterday, tomorrow, before, after, earlier, later, next, first, last, now, soon, early, late earliest, latest, quick, quicker, quickest, quickly, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, hour, o'clock, half past, quarter past, quarter to, a.m, p.m, digital, analogue, 12 hour clock time, 24 hour clock time

Geometry **Shape** (Summer Term)	• 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.	• 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 3D shapes	• Selection of 2-D shapes • Selection of 3-D shapes • 2-D and 3-D shape word mats	Shape, pattern, flat, curved, straight, round, hollow, solid, surface, size, symmetry, corner, side, point, rectangle (including square), rectangular, circle, circular, triangle, triangular, pentagon, pentagonal, hexagon, hexagonal, octagon, octagonal, quadrilateral, right-angled, parallel, perpendicular, face, edge, vertex, vertices, cube, cuboid, pyramid, sphere, hemisphere, cone, cylinder, prism, triangular prism
Statistics (Summer Term)	• 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.	• Make tally charts • Draw pictograms (2, 5, 10) • Interpret pictograms (2,5,10) • Pictograms • Bar charts • Tables		Count, tally, sort, vote, graph, represent block graph, pictogram, group, set, list, table, chart, bar chart, frequency table, label title, axis, axes, diagram, most popular, least popular, most common, least common