



Bloxwich Academy
'Be The Best You Can Be'

Maths Framework Overview

Overview

This progression map shows the concepts and small steps taught to pupils from Year 1 to Year 6. Maths is mapped across each term and concepts revisited incorporating a spiral approach through retrieval this is to ensure we broaden and deepen pupils' mathematical knowledge and they have the chance to use and apply new knowledge to a range of tasks including reasoning and problem solving. In brackets, after the concept, is the small steps taught for remembering and mastering.

Term	Autumn	Spring	Summer
Year 1	<p>Place Value (within 10) (sort objects, count objects, represent objects, numbers as words, count on from any number, 1 more, count backwards within 10, 1 less, compare groups by matching, fewer, more, same, less than, greater than, equal to, compare numbers, order objects and numbers, the number line)</p> <p>Addition and Subtraction (within 10) (introduce parts and whole, part-whole model, write number sentences, addition facts, number bonds within 10, number bonds to 10, add together, add more, addition problems, find a part, the eight facts, take away/cross out, how many left, subtraction on a number line, add or subtract 1 or 2)</p> <p>Shape (recognise and name 3-D shapes, sort 3-D shapes, recognise and name 2-D shapes, name 2-D shapes, patterns with 2-D and 3-D shapes)</p>	<p>Place Value (within 20) (count within 20, understand numbers between 10 and 20, 1 more and 1 less, the number line to 20, use the number line to 20, estimate on a number line, compare numbers to 20, order numbers to 20)</p> <p>Addition and Subtraction (within 20) (add by counting on within 20, add ones using number bonds, find and make number bonds to 20, doubles, near doubles, subtract ones using number bonds, counting back, finding the difference, related facts)</p> <p>Place Value (within 50) (count from 20 to 50, 20, 30, 40, 50, count by making groups of tens, groups of tens and ones, partition into tens and ones, the number line to 50, estimate on a number line to 50, 1 more, 1 less)</p> <p>Length and Height (compare lengths and heights, measure length using objects, measure length in centimetres)</p>	<p>Multiplication and Division (count in 2s, 10s and 5s, recognise equal groups, add equal groups, make arrays, make doubles, make equal groups, grouping, sharing)</p> <p>Fractions (recognise half of an object or shape, find half of an object or shape, recognise a half of a quantity, find a half of a quantity, recognise a quarter of an object or a shape, find a quarter of an object or shape, recognise a quarter of a quantity, find a quarter of a quantity)</p> <p>Position and Direction (describe turns, describe position, left or right, forwards and backwards, above and below, ordinal numbers)</p> <p>Place Value (within 100) (count from 50 to 100, tens to 100, partition into tens and ones, the number line to 100, 1 more, 1 less, compare numbers with the same amount of tens, compare any two numbers)</p>

		<p>Mass and Volume (heavier and lighter, measure mass, compare mass, full and empty, compare volume, measure capacity, compare capacity)</p>	<p>Money (unitising, recognise coins, recognise notes, count in coins)</p> <p>Time (before and after, days of the week, months of the year, hours, minutes and seconds, tell the time to the hour, tell the time to the half hour)</p>
Year 2	<p>Place Value (numbers to 20, count objects to 100, recognise tens and ones, use a place value chart, partition and write numbers to 100, 10s on the number line, compare objects, compare numbers, order objects and numbers, count in 2s, 3s, 5s and 10s)</p> <p>Addition and Subtraction (bonds to 10, fact families, related facts, bonds to 100, add and subtract 1s, add by making 10, add three 1-digit numbers, subtract from 10, subtract across 10, subtract a 1-digit number from a 2-digit number, add and subtract two 2-digit numbers, mixed addition and subtraction, compare number sentences, missing number problems)</p> <p>Shape (recognise 2-D and 3-D shapes, count sides, count vertices, draw 2-D shapes, lines of symmetry, sort 2-D shapes, count faces, count edges, count vertices, sort 3-D shapes, make patterns)</p>	<p>Money (count pence, count pounds, choose notes and coins, make the same amount, compare amounts of money, calculate with money, make a pound, find change, two-step problems)</p> <p>Multiplication and Division (recognise equal groups, add equal groups, introduce the multiplication symbol, multiplication sentences, use arrays, make equal groups by sharing and grouping, the 2-times table, divide by 2, doubling and halving, odd and even numbers, the 10 times-table, divide by 10, the 5 times-table, divide by 5)</p> <p>Length and Height (measure in centimetres, and metres, compare lengths and heights, order length and heights, four operations)</p> <p>Mass, Capacity and Temperature (compare mass, measure in grams, measure in kilograms, four operations with mass, compare volume and capacity, measure in millilitres and litres, four operations with volume and capacity, temperature)</p>	<p>Fractions (parts and whole, equal and unequal parts, recognise a half, find a half, recognise a quarter, find a quarter, recognise a third, find a third, find the whole, unit fractions, non-unit fractions, half and two quarters, recognise three quarters, find three-quarters, count in fractions up to a whole)</p> <p>Time (O'clock and half past, quarter past and quarter to, tell time past the hour, tell time to the hour, tell the time to 5 minutes, minutes in an hour, hours in a day)</p> <p>Statistics (make tally charts, tables, block diagrams, draw pictograms, interpret pictograms)</p> <p>Position and Direction (language of position, describe movement, describe turns, describe movement and turns, shape patterns with turns)</p>
Year 3	<p>Place Value (represent and partition numbers to 100, number line to 100, hundreds, represent and partition numbers to 1,000, hundreds, tens and ones, find 1, 10 or 100 more or less, estimate on a number line to 1,000, compare numbers to 1,000, order numbers to 1,000, count in 50s)</p> <p>Addition and Subtraction (apply number bonds within 10, add and subtract 1s, 10s and 100s, spot the pattern, add and subtract 1s)</p>	<p>Multiplication and Division (multiples of 10, related calculations, reasoning, multiply a 2-digit number with exchange, link multiplication and division, divide a 2-digit number by a 1-digit numbers with remainders, scaling, how many ways?)</p> <p>Length and Perimeter (metres and centimetres, millimetres, equivalent lengths, compare lengths, add lengths, subtract lengths, measure perimeter, calculate perimeter)</p>	<p>Fractions (add fractions, subtract fractions, partition the whole, unit fractions of a set of objects, non-unit fractions of a set of objects, reasoning)</p> <p>Money (pounds and pence, convert pounds and pence, add and subtract money, find change)</p> <p>Time</p>

	<p>across a 10, and 100, make connections, add and subtract two numbers, add and subtract two numbers across a 10 and 100, add and subtract 2-digit and 3-digit numbers, complements to 100, estimate answers, inverse operations, make decisions)</p> <p>Multiplication and Division (equal groups, use arrays, multiples of 2, 5 and 10, sharing and grouping, multiply and divide by 3, 4 and 8)</p>	<p>Fractions (denominators, compare and order unit fractions, numerators, understand the whole, compare and order non-unit fractions, fractions and scales, fractions on a number line, count in fractions, equivalent fractions on a number line and as bar models)</p> <p>Mass and Capacity (use scales, measure mass in grams, measure mass in kilograms, equivalent masses, compare mass, add and subtract mass, measure capacity and volume in millilitres and litres, compare capacity and volume, add and subtract capacity and volume)</p>	<p>(Roman numerals to 12, tell the time to 5 minutes, find the time to the minute, read time on a digital clock, use a.m. and p.m., years, months and days, days and hours, hours and minutes, minutes and seconds, units of time)</p> <p>Shape (turns and angles, right angles, compare angles, measure and draw accurately, horizontal and vertical, parallel and perpendicular, recognise and describe 2-D shapes, draw polygons, recognise and describe 3-D shapes, make 3-D shapes)</p> <p>Statistics (interpret pictograms, draw pictograms, interpret bar charts, draw bar charts, collect and present data, two-way tables)</p>
Year 4	<p>Place Value (represent numbers to 1,000, number lines, estimation, comparing numbers, ordering numbers, Roman numerals, rounding to 10, 100 and 1,000)</p> <p>Addition and Subtraction (add and subtract 1, 10, 100 and 1,000, add up to two 4-digit numbers with exchanges, subtract two 4-digit numbers with exchanges, estimating)</p> <p>Measurement (area, counting squares, making shapes, comparing areas)</p> <p>Multiplication and Division (multiples of 3, multiplying and dividing by 6, 7, 9, 11 & 12, multiplying by 1 and 0, multiplying three numbers)</p>	<p>Multiplication and Division (factor pairs, multiply by 10 and 100, divide by 10 and 100, related facts, multiply up to a 3-digit number by a 1-digit number, divide up to a 3-digit number by a 1-digit number, remainders)</p> <p>Length and Perimeter (measure in kilometres and metres, perimeter of rectilinear shapes, find missing lengths, calculate perimeter, perimeter of polygons)</p> <p>Fractions (understand the whole, count beyond 1, partition a mixed number, improper fractions, converting fractions, equivalent fractions, add two or more fractions, subtract two fractions, add fractions and mixed numbers, subtract from whole and mixed numbers)</p> <p>Decimals (tenths as fractions and decimals, number lines, divide a 1-digit and 2-digit number by 10, hundredths as fractions and decimals, divide by 100)</p>	<p>Decimals (make a whole with tenths and hundredths, partition, compare and order decimals, round to the nearest whole number, halves and quarters)</p> <p>Money (write money using decimals, convert between pounds and pence, compare money, estimate, calculate)</p> <p>Time (years, months, weeks, days, hours, minutes, seconds, convert between analogue and digital, convert to the 24hr clock, convert from the 24hr clock)</p> <p>Shape (angles, compare and order angles, triangles, quadrilaterals, polygons, lines of symmetry)</p> <p>Statistics (interpret charts, comparison, sum, difference, interpret line graphs, draw line graphs)</p> <p>Position and Direction (describe position using coordinates, plot coordinates, draw 2D shapes, translate on a grid)</p>

<p>Year 5</p>	<p>Place Value</p> <p>(Roman numerals to 1,000, numbers to 10,000, 100,000 and 1,000,000, powers of 10, 10-100,000 more or less, number line to 1 million, compare and order numbers, round to the nearest 10, 100 or 1,000)</p> <p>Addition and Subtraction</p> <p>(mental strategies, add and subtract whole numbers with more than 4-digits, round to check answers, multi-step addition, compare calculations, find missing numbers)</p> <p>Multiplication and Division</p> <p>(multiples, common multiples, factors, common factors, prime numbers, square numbers, cube numbers, multiply and divide by 10, 100 and 1,000)</p> <p>Fractions</p> <p>(find equivalent fractions, convert improper fractions to mixed numbers, convert mixed numbers to improper fractions, compare and order fractions less than 1, add fractions within 1, add and subtract fractions with the same denominator, add to a mixed number, subtract from a mixed number, subtract two mixed numbers)</p>	<p>Multiplication and Division</p> <p>(multiply up to a 4-digit number by a 2-digit number, solve problems with multiplication, short division, divide a 4-digit number by a 1-digit number, divide with remainders, efficient division, solve problems)</p> <p>Fractions</p> <p>(multiply a unit fraction by an integer, multiply a non-unit fraction by an integer, multiply a mixed number by an integer, calculate a fraction of a quantity, fraction of an amount, find the whole, use fractions as operators)</p> <p>Decimals and Percentages</p> <p>(decimals up to 2 decimal places, equivalent fractions and decimals - tenths and hundredths, thousandths as fractions and decimals, place value chart, order and compare decimals, round to the nearest whole number and 1 decimal place, understand percentages as fractions and decimals)</p> <p>Perimeter and Area</p> <p>(perimeter of rectangles, perimeter or rectilinear shapes, perimeter of polygons, area of rectangles, area of compound shapes, estimate area)</p> <p>Statistics</p> <p>(draw line graphs, read and interpret line graphs, read and interpret tables, two-way tables, read and interpret timetables)</p>	<p>Shape</p> <p>(understand and use degrees, classify and estimate angles, measure angles up to 180, draw lines and angles, calculate angles around a point and on a line, lengths and angles in shapes, regular and irregular polygons, 3-D shapes)</p> <p>Position and Direction</p> <p>(read and plot coordinates, problem solving, translation with coordinates, lines of symmetry, reflection)</p> <p>Decimals</p> <p>(add and subtract within 1, add and subtract decimals with the same and different number of decimal places, efficient strategies, decimal sequences, multiply and divide by 10, 100 and 1,000, missing values)</p> <p>Navigate Numbers</p> <p>(understand negative numbers, count through zero in 1s and multiples, compare and order negative numbers, find the difference)</p> <p>Converting Units</p> <p>(kilograms and kilometres, millimetres and millilitres, convert units of length, convert between metric and imperial units, convert units of time, calculate with timetables)</p> <p>Volume</p> <p>(cubic centimetres, compare volume, estimate volume, estimate capacity)</p>
<p>Year 6</p>	<p>Place Value</p> <p>(numbers to 1,000,000, numbers to 10,000,000, powers of 10, number lines, compare and order any integers, round any integer, negative numbers)</p> <p>Addition, Subtraction, Multiplication & Division</p> <p>(add and subtract integers, common factors, common multiples, rules of divisibility, primes to 100, square and cube numbers, multiply up to a 4-digit number by a 2-digit number, short division, division using factors, long</p>	<p>Ratio</p> <p>(add or multiply, use ratio language, ration symbol, scale drawing, use scale factors, similar shapes, ratio problems, proportion problems, recipes)</p> <p>Algebra</p> <p>(1 and 2 step function machines, form expressions, substitution, formulae, form equations, solve 1 and 2 step equations, find pairs of values, solve problems with two unknowns)</p>	<p>Shape</p> <p>(measure and classify angles, calculate angles, vertically opposite angles, angles in a triangle, angles in quadrilaterals, angles in polygons, circles, draw shapes accurately, nets of 3-D shapes)</p> <p>Position and Direction</p> <p>(the first quadrant, read and plot in four quadrants, translation, reflections)</p>

	<p>division, multi-step problems, order of operations, mental calculations and estimation, reason from known facts)</p> <p>Fractions</p> <p>(equivalent fractions and simplifying, number lines, compare and order, add and subtract fractions, add and subtract mixed numbers, multi-step problems, multiply fractions by integers and fractions, divide a fraction by an integer, fraction of an amount)</p> <p>Converting Units</p> <p>(metric measures, convert metric measures, miles and kilometres, imperial measures)</p>	<p>Decimals</p> <p>(place value within 1, integers and decimals, round decimals, add and subtract decimals, multiply and divide by 10, 100 and 1,000, multiply and divide decimals by integers)</p> <p>Fractions, Decimals & Percentages</p> <p>(decimal and fraction equivalents, fractions as division, fractions to percentages, equivalent fractions, decimals & percentages, order fractions, decimals & percentages, percentage of an amount, missing values)</p> <p>Area, Perimeter & Volume</p> <p>(shapes – same area, area and perimeter, area of a triangle, area of a parallelogram, volume – counting cubes, volume of a cuboid)</p> <p>Statistics</p> <p>(line graphs, dual bar charts, read and interpret pie charts, pier charts with percentages, draw pie charts, the mean)</p>	<p>Themed Projects, Consolidation & Problem Solving</p> <p>(White Rose Bakery, White Rose Tours, White Rose Futures)</p>
--	---	---	---