*Children are expected to know all the language from previous years. Each year group entry specifies the **new language** required for that year group.
**Mental maths expectations in *italics*

Addition and subtraction

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• *Automatically recall number bonds for numbers 0-5 and some to 10.* • Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10.	• *Represent and use number bonds and related subtraction facts within 20* • *Add and subtract one-digit and two-digit numbers to 20, including zero* • *Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs* • Solve simple one-step problems that involve addition and subtraction up to 100, using concrete objects, pictorial representations and missing number problems such as 7 = □ - 9	• *Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100* • *Add and subtract numbers using concrete objects, pictorial representation, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers* • *Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot* • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems • Solve simple addition and subtraction word problems up to 100 involving numbers, quantities and measure • Add 2 2-digit numbers using the column method with no carrying • Subtract 2 2-digit numbers using the column method and no exchanging	• *Mentally add and subtract a 3-digit number and a hundreds number - 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 3-digits, using formal written methods of columnar addition and subtraction • Estimate the answer to a calculation and use the inverse operations to check answers • Solve problems including missing number problems, using number facts, place value, and more complex addition and subtraction	• Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • Estimate and use inverse operations to check answers to a calculation • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	• *Add and subtract numbers mentally with increasingly large numbers* • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	• *Perform mental calculations, including with mixed operations and large numbers* • *Use their knowledge of the order of operations to carry out calculations involving the four operations* • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
Vocabulary	add, more, and make, sum, total altogether score double one more, two more, ten more… how many more to make… ? how many more is… than…? take (away), leave how many are left/left over? how many have gone? one less, two less… ten less… how many fewer is… than…? difference, is the same as, total, altogether, take away	Plus, near double, how much more is..?, subtract, minus, how much less is…? Equals, sign, addend, minuend, subtrahend, difference, sum	Multiple of 10, increase, decrease	Multiple of 100	Whole number (ones)	Tenths, ones	

Algebra

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• Continue, copy and create repeating patterns	• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9 • Represent and use number bonds and related subtraction facts within 20 • Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening	• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems • Compare and sequence intervals of time • Order and arrange combinations of mathematical objects in patterns	• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • Solve problems, including missing number problems, involving multiplication and division, including integer scaling	• Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit	• Use the properties of rectangles to deduce related facts and find missing lengths and angles	• Express missing number problems algebraically • Find pairs of numbers that satisfy number sentences involving two unknowns • Enumerate all possibilities of combinations of two variables • Use simple formulae • Recognise when it is possible to use formulae for area and volume of shapes • Generate and describe linear number sequences
Vocabulary	Pattern, count up, count on, count back, count in ones, count in twos, doubling, number pattern	Plus, how much more is..?, subtract, minus, how much less is…? Equals, sign, addend, minuend, subtrahend, difference, sum Spring, Summer, Autumn, Winter, month, year, weekend, midnight, fast, faster, fastest, hour, o'clock, half past clock, watch, hands how long ago? how long will it be to…? how long will it take to…? how often? always, never, often, sometimes, usually, once, twice	Multiple of 10, increase, decrease, inverse, sequence, interval, Months of the year: January, February… fortnight, month, year, minute, second, quarter to, quarter past, digital/analogue clock/watch, timer	Multiple of 100	Whole number (ones)	Tenths, ones, formula congruent, axis of symmetry, reflective symmetry, octahedron	Formulae, equation, unknown, variable

Fractions, decimals & percentages

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• Double an amount of objects • Explore the relationship between doubling and halving • Solve problems using doubling, halving and sharing	• Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½ • Recognise the equivalence of two quarters and one half • Calculate a third and a quarter of numbers up to 100 • Count in quarters up to 10 • Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • Write simple fractions eg. ½ of 6 = 3	• Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • Count up and down in tenths • Recognise and write decimal equivalents of any number of tenths or hundredths • 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 denominators • Find pairs of fractions that add up to a whole • Solve problems that involve all aspects of fractions learnt so far	• Recognise and show, using diagrams, families of common equivalent fractions • Recognise and write decimal equivalents to ¼, ½, ¾ • Recognise and write decimal equivalents of any number of tenths or hundredths • Round decimals with one decimal place to the nearest whole number • Compare numbers with the same number of decimal places up to two decimal places • Identify and name equivalent fractions of a given fraction including tenths and hundredths • Add and subtract fractions with the same denominator • Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • Count up and down in hundredths • Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Solve simple measure and money problems involving fractions and decimals to two decimal places • Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Compare and order fractions whose denominators are all multiples of the same number • Read, write, order and compare numbers with up to three decimal places • Round decimals with two decimal places to the nearest whole number and to one decimal place • Add and subtract decimals up to 3 decimal points • Solve problems involving numbers up to three decimal places • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Read and write decimal numbers as fractions (eg. 0.71 = 71/100) • Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25 • Mentally add and subtract tenths and mixed numbers with tenths • Solve problems by comparing and ordering fractions whose denominators are all multiples of the same number • Solve problems involving number up to three decimal places • Add and subtract fractions with the same denominator and related fractions; write mathematical statements >1 as a mixed number • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (eg. 2/5 + 4/5 = 6/5 = 11/5) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	• Compare and order fractions, including fractions >1 • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Multiply simple pairs of proper fractions writing the answer in its simplest form (eg. 1/4 x 1/2 = 1/8) • Divide proper fractions by whole numbers (eg. 1/3 ÷ 2 = 1/6) • Identify the value of each digit in numbers given to three decimal places • Use written division methods in cases where the answer has up to 2 decimal places • Solve problems which require answers to be rounded to specified degrees of accuracy • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Associate a fraction with division and calculate decimal fraction equivalents (eg. 0.375) for a simple fraction (eg. 3/8) • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Multiply one-digit numbers with up to two decimal places by whole numbers • Multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places • Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
Vocabulary	parts of a whole half quarter	fraction equal part equal grouping equal sharing one of two equal parts one of four equal parts	equivalence, denominator, numerator, equivalent fraction, two halves, two quarters, three quarters, one third, two thirds, one of three equal parts	mixed number sixths, sevenths, eighths, tenths…	Hundredths, decimal, decimal fraction, decimal point, decimal place, decimal equivalent, proportion	Proper fraction, improper fraction, equivalent, reduced to, cancel, thousandths, in every, for every, percentage, percent	

Cyril Jackson Primary School Curriculum Progression

MATHS

		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement	Area and perimeter	• Make comparisons between objects relating to size, length, weight and capacity. • Compare length, weight and capacity.			• measure the perimeter of simple 2-D shapes	• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares • Know the formula for measuring the area of a square or rectangle • Know the formula for measuring the perimeter of a square or rectangle	• Measure and calculate the perimeter and area of composite rectilinear shapes in standard units (cm and m) • Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	• Calculate the area of parallelograms and triangles and be able to use the correct formulae • Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise when it is possible to use formulae for area and volume of shapes
	Vocabulary	Measure, size, compare, guess, estimate, metre, length, height, width	centimetre, ruler, metre stick	Measurement, measuring scale, tape measure	millimetre, kilometre, mile, edge, perimeter, surface size	unit, standard unit, metric unit, estimate, area, covers, square centimetre (cm2)	square metre (m2), square millimetre (mm2)	yard, foot, feet, inch, inches, circumference area
Measurement	Capacity and volume	• Compare length, weight and capacity.	• Measure and begin to record capacity/volume using standard units • Compare, describe and solve practical problems for: capacity and volume [eg. full/empty, more than, less than, half, half full, quarter]	• Choose and use appropriate standard units to estimate and measure capacity (l/ml) to the nearest unit, using measuring equipment • compare and order lengths, mass, volume/capacity and record the results using >, < and =	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)		• Estimate volume (eg. using 1 cm3 blocks to build cubes and cuboids) and capacity (eg. using water)	• Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3) and extending to other units, such as mm cubed (mm3) and km cubed (km3)
	Vocabulary	Full, empty, half full, holds, container	litre, half litre, capacity, volume, more than, less than, quarter full	Millilitre, contains	Measuring cylinder		Pint, gallon	centilitre cubic centimetres (cm3), cubic metres (m3), cubic millimetres (mm3), cubic kilometres (km3)
Measurement	Length	• Make comparisons between objects relating to size, length, weight and capacity. • Compare length, weight and capacity	• Compare, describe and solve practical problems for: • lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] • Measure and begin to record lengths/heights using standard units	• Choose and use appropriate standard units to estimate and measure length/height (m/cm) in any direction using measuring equipment • Compare and order lengths, mass, volume/capacity and record the results using >, < and =	• Measure, compare, add and subtract: lengths (m/cm/mm)	• Convert between different units of measure (eg. kilometre to metre; hour to minute) • Estimate, compare and calculate different measures • Know the formula for measuring the perimeter of a square or rectangle	• Understand and use basic equivalences between metric and common imperial units and express them in approximate terms, such as inches, pints and pounds • Convert between different units of metric measure (eg. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • Measure and calculate the perimeter and area of composite rectilinear shapes in standard units (cm and m)	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • Convert between miles and kilometres • Recognise that shapes with the same areas can have different perimeters and vice versa
	Vocabulary	metre length, height, width, depth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, near, close	centimetre, ruler, metre stick	further, furthest, tape measure	millimetre, kilometre, mile, distance apart … between … to … from, perimeter	Breadth, edge, area, covers square centimetre (cm2)	square metre (m2), square millimetre (mm2)	yard, foot, feet, inch, inches, circumference

Cyril Jackson Primary School Curriculum Progression

MATHS

		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement	Money	• Count objects, actions and sounds.	• Recognise and know the value of different denominations of coins and notes	• Combine amounts to make a particular value up to £50 • Recognise and use symbols for pounds (£) and pence (p) • Match different combinations of coins to equal amounts of money • Add and subtract money of the same unit, including giving change up to £5 • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	• Add and subtract amounts of money to give change using both £ and p in practical contexts and give change from £10	• Estimate, compare and calculate money in pounds and pence • Solve simple money problems involving fractions and decimals to two decimal places	• Use all four operations to solve problems involving measure money using decimal notation	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
	Vocabulary	money coin penny, pence, pound price, cost buy, sell spend, spent pay	change dear, costs more, cheap, costs less, cheaper costs the same as how much …? how many …? total	bought, sold			Discount, currency	profit, loss
M'ment	Temperature	• Understand the effect of changing seasons on the natural world around them.		• Choose and use appropriate standard units to estimate and measure temperature using a thermometer • Read relevant scales to the nearest numbered unit • Understand 0˚ C and 100˚ C and estimate the outside and room temperature		• Count backwards through zero to include negative numbers	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	
	Vocabulary			Temperature, degree, centigrade				
Measurement	Time	• Talk about patterns of events, in cooking, gardening, sewing or getting dressed. • Talk about the sequence of events in stories. • Count down to forthcoming events on the calendar in terms of number of days or sleeps. • Refer to the days of the week, and the day before or day after	• Measure and begin to record time using standard units • Recognise and use language relating to dates, including days of the week, months and years. • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times • Sequence events in chronological order	• Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • Compare and sequence intervals of time • Know the number of minutes in an hour and the number of hours in a day	• 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 to the nearest minute; record and compare time in terms of seconds, minutes, hours and O'clock • Know the number of seconds in a minute and the number of days in each month, year and leap year • Compare duration of events, eg. to calculate the time taken by particular events or tasks	• Read, write and convert time between analogue and digital 12 and 24-hour clocks • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	• Solve problems involving converting between units of time	• Use, read, write and convert between standard units, converting the measurement of time from a smaller unit of measure to a larger unit, and vice versa
	Vocabulary	First, then, after, before, Every day we… Every evening we… Morning, afternoon, evening, night-time, earlier, later, too late, too soon, in a minute, before, after, yesterday, tomorrow, Monday, Tuesday… day, week, birthday, holiday, bedtime, dinnertime, playtime today, next, last now, soon, early, late, quick, quicker, quickest, quickly, slow, slower, slowest, slowly, old, older, oldest new, newer, newest, takes longer, takes less time, clock, watch, hands, time	Spring, Summer, Autumn, Winter, month, year, weekend, midnight, fast, faster, fastest, hour, o'clock, half past clock, watch, hands how long ago? how long will it be to…? how long will it take to…? how often? always, never, often, sometimes, usually, once, twice	Months of the year: January, February… fortnight, month, year, minute, second, quarter to, quarter past, digital/analogue clock/watch, timer,	Century, calendar, date, am, pm, past, to, hundred hours, convert, 24 hour clock, 12 hour clock	Leap year, millennium, date of birth, timetable, arrive, depart		Decade, noon, rate, kilometres per hour, Greenwich Mean Time, British Summer Time International Date Line

*Children are expected to know all the language from previous years. Each year group entry specifies the **new language** required for that year group.

**Mental maths expectations in *italics*

Multiplication and division

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• Compare numbers • Double an amount of objects • Explore the relationship between doubling and halving • Solve problems using doubling, halving, sharing and grouping	• *Count in multiples of twos, fives and tens* • Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	• *Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward* • *Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot* • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• Count from 0 in multiples of 4, 8, 50 and 100 • 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 • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • Estimate the answer to a calculation and use inverse operations to check answers • 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	• *Count in multiples of 6, 7, 9, 25 and 1000* • *Recall multiplication and division facts for multiplication tables up to 12 × 12* • *Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers* • *Recognise and use factor pairs and commutativity in mental calculations* • Multiply two-digit and three-digit numbers by a one-digit number using formal written layout • Estimate and use inverse operations to check answers to a calculation • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	• *Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000* • *Multiply and divide numbers mentally drawing upon known facts* • *Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000* • Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • Establish whether a number up to 100 is prime and recall prime numbers up to 19 • Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	• *Perform mental calculations, including with mixed operations and large numbers* • *Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)* • Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • Divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • Use written division methods in cases where the answer has up to two decimal places • Identify common factors, common multiples and prime numbers • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3
Vocabulary	sharing doubling halving number patterns	multiplication multiply multiplied by multiple division dividing grouping array	groups of times once, twice, three times … ten times repeated addition divide, divided by, divided into share, share equally left, left over one each, two each, three each … ten each group in pairs, threes … tens equal groups of row, column multiplication table multiplication fact, division fact	Factor, product, remainder	inverse square, squared cube, cubed		

*Children are expected to know all the language from previous years. Each year group entry specifies the **new language** required for that year group.

**Mental maths expectations in *italics*

Place Value

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• *Count objects, actions and sounds* • *Subitise* • *Count beyond 10* • *Link the number symbol with its cardinal value number* • Compare numbers • Explore the composition of numbers to 10	• Count to and across 100, forwards and backwards beginning with 0 or 1, or from any given number in 1s, 2s, 5s and 10s • Read, write and order numbers from 1 to 20 in numerals and words • Revise identifying a number one more and one less than any given number up to 100 • Identify and represent numbers using concrete objects, number line and use =, >, <, most, least up to 100 • Identify and represent numbers using objects and pictorial representations including the number line	• Count in steps of 2, 3 and 5 from 0, and count in tens from any number forward or backward • Compare and order at least three numbers both increasing and decreasing from 0 up to 100 • Use <, > and = signs • Read, write numbers to at least 100 in numerals and in words • Use place value and number facts to solve missing number problems • Know all odd and even numbers up to 100 • Identify, represent and estimate numbers using different representations, including a number line • Recognise the place value of each digit in a two-digit number (tens, ones)	• Read and write numbers to at least 1000 in numerals and words • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Count from 0 in multiples of 4, 8, 50 and 100 • Find 10 or 100 more or less than a given number • Identify, represent and estimate numbers using different representations • Solve number problems and practical problems involving these ideas • Compare and order numbers up to 1000 using =, >, <	• Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • Round any number up to 10,000 to the nearest 10, 100 or 1000 • Read Roman numerals to 100 (I to C) and understand how, over time, the numeral system changed to include the concept of zero and place value • Count backwards through zero to include negative numbers and understand that -2 is greater than -3 • Read, write, compare and order numbers up to 10,000 using =, >, < • Count in multiples of 6, 7, 9, 25 and 1000 • Find 1000 more or less than a given number • Order and compare numbers beyond 1000 • Identify, represent and estimate numbers using different representations • Solve number and practical problems that involve all of the above and with increasingly large positive numbers	• Count forwards and backwards in steps of 1,000 and 100,000 for any given number up to 1,000,000 • Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • Round any number up to 1,000,000 to the nearest 100,000 10,000, 1,000, 100, 10 • Read Roman numerals to 1000(M) and recognise years written in Roman numerals • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • Solve number problems and practical problems that involve all of the above	• Read, write, order and compare numbers up to 10,000, 000 and determine the value of each digit • Use negative numbers in context and calculate intervals across zero • Round any whole number to a required degree of accuracy • Solve number problems and practical problems that involve all these aspects
Vocabulary	number zero, one, two, three… to twenty and beyond zero, ten, twenty… one hundred none how many…? count, count (up) to count on (from, to) count back (from, to) count in ones, twos… tens… more, less, many, few odd, even every other how many times? pattern, pair guess how many, estimate nearly, close to, about the same as just over, just under too many, too few, enough, not enough, the same number as, as many as Of two objects/amounts: greater, more, larger, bigger less, fewer, smaller Of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third… tenth last, last but one before, after next between above, below, guess how many, estimate nearly, close to about the same as just over, just under too many, too few, enough, not enough	Ones, tens, exchange, digit, thirteen, fourteen, etc, equal to, eleventh, twelfth,…twentieth, half way between, roughly	Threes, fours, fives… tally, sequence, rule, hundreds, one, two or three digit number, place, place value, stands for, represents, round, nearest, exact, exactly	One hundred more, one hundred less, approximately, relationship, ascending, descending	Thousands, ten thousand, hundred thousand, four digit number, numeral, next, consecutive, sort, classify, property, round, integer, positive, negative	Is approximately equal to, prime	Prime factor, factorise

Cyril Jackson Primary School Curriculum Progression

MATHS

Position and direction

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• Select, rotate and manipulate shapes to develop spatial reasoning skills	• Describe position, direction and movement, including half, quarter and three-quarter turns.	• Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) • Order and arrange combinations of mathematical objects in patterns and sequences	• Know that a right angle has 90˚ and a straight angle has 180˚	• Describe positions on a 2-D grid as coordinates in the first quadrant • Describe movements between positions as translations of a given unit to the left/right and up/down • Plot specified points and draw sides to complete a given polygon	• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	• Describe positions on the full coordinate grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Vocabulary	position over, under above, below top, bottom, side on, in outside, inside around in front, behind front, back beside, next to opposite apart between middle, edge corner direction left, right up, down forwards, backwards, sideways, across next to, close, near, far along through to, from, towards, away from movement slide roll turn stretch, bend whole turn, half turn	Underneath, centre, journey, quarter turn, three quarter turn	clockwise, anticlockwise, route, higher, lower, right angle, straight line	compass point north, south, east, west, N, S, E, W horizontal, vertical, diagonal, angle … is a greater/smaller angle than, acute angle obtuse angle	north-east, north-west, south-east, south-west, NE, NW, SE, SW, translate, translation, rotate, rotation, degree, ruler, set square angle measurer, compass, reflection	Co-ordinate, protractor	

Shape

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation	• Select, rotate and manipulate shapes to develop spatial reasoning skills • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can • Continue, copy and create repeating patterns	• Recognise and name common 2-D and 3-D shapes, including: o 2-D shapes [e.g. rectangles (including squares), circles and triangles] o * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]	• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify 2-D shapes on the radius surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • Compare and sort common 2-D and 3-D shapes and everyday objects	• 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	• Identify lines of symmetry in 2-D shapes presented in different orientations • Complete a simple symmetric figure with respect to a specific line of symmetry • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • Identify acute and obtuse angles and compare and order angles up to two right angles by size	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • Draw given angles, and measure them in degrees (^{o}) • Use the properties of rectangles to deduce related facts and find missing lengths and angles • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • Identify: o * angles at a point and one whole turn (total 360^{o}) o * angles at a point on a straight line and ½ a turn (total 180^{o}) o * other multiples of 90^{o}	• Recognise, describe and build simple 3-D shapes, including making nets • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice identify 2-D shapes on the radius • Draw 2-D shapes using given dimensions and angles • Recognise, describe and build simple 3-D shapes, including making nets • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
Vocabulary	corner, side rectangle (including square) circle triangle 3-D shape face, edge, vertex, vertices cube pyramid sphere cone shape, pattern flat curved, straight round hollow, solid sort make, build, draw size, bigger, larger, smaller symmetrical pattern, repeating pattern match 2-D shape, shape, pattern	Symmetry, symmetrical pattern, point, pointed, cuboid, cylinder	Surface, line of symmetry, rectangular, circular, triangular, pentagon, hexagon, octagon	Perimeter, pentagonal, hexagonal, octagonal, quadrilateral, right angled, parallel, perpendicular, hemisphere, prism, triangular prism	Line, construct, sketch, centre, angle, right-angled base, square-based, regular, irregular, two dimensional, oblong, rectilinear, equilateral triangle, isosceles triangle, scalene triangle, heptagon, parallelogram, rhombus, trapezium polygon, three dimensional, spherical, tetrahedron, polyhedron, cylindrical, kite	Radius, diameter, congruent, axis of symmetry, reflective symmetry, octahedron,	circumference, concentric, arc net, open, closed, intersecting, intersection plane, dodecahedron net, open, closed

Statistics

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End of year expectation			• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totalling and comparing categorical data	• 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.	• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	• Complete, read and interpret information in tables, including timetables • Solve comparison, sum and difference problems using information presented in a line graph	• Interpret and construct pie charts and line graphs and use these to solve problems • Calculate and interpret the mean as an average
Vocabulary			count, sort, group, set, list, vote, table, tally, graph, block graph, pictogram, represent, label, title, most popular, most common, least popular, least common	chart, bar chart, frequency table, axis, axes, diagram, data, survey, questionnaire	Carroll Diagram, Venn diagram,	Database, timetable, line graph	Pie chart, mean, mode, median, range, statistics, distribution