COLWICH Primary School Curriculum Statement
Maths Progression Grid (1)

God is love, so we: Learn to Love, Love to Learn, Learn for Life

The progression grid outlines the specific knowledge which pupils are expected to learn in each phase, over a two year cycle, (with the exception of EYFS) along with the specific vocabulary which supports this understanding.

Threshold Concepts

	To know and use numbers	Addition and Subtraction	To use algebra
At EYFS	**Number** • Have a deep understanding of number to 10, including the composition of each number; • Subitise (recognise quantities without counting) up to 5; • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Selects own mathematical problems and ways to solve and record them, using trial and error where necessary. **Numerical Patterns** • Verbally count beyond 20, recognising the pattern of the counting system; • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. • May recognise the pattern of counting in 10s.	**Autumn** • Solve real world mathematical problems with numbers up to 5. • Compare quantities using language 'more than' and 'fewer' • Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle) **Spring** • Automatically recall number bonds for numbers bond to 0-5, then 0-10. • Compare numbers using vocabulary such as 'more than', 'less than', 'fewer', 'the same as', 'equal to ' • Understand the one more/one less relationship between consecutive numbers. **Summer** **ELG Number** • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **ELG Numerical Patterns** • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. • May recognise the pattern of counting in 10s.	n/a
At Key Stage 1	**Year 1** • Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens • Given a number, identify one more and one less	**Year 1** • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one-digit and two-digit numbers to 20, including zero Solve one-step problems that involve addition	*Solve addition and subtraction problems involving missing numbers.

	• Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • Read and write numbers from 1 to 20 in numerals and words **Year 2** • Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • Recognise the place value of each digit in a two-digit number (tens, ones) • Identify, represent and estimate numbers using different representations, including the number line • Compare and order numbers from 0 up to 100; use <, > and = signs • Read and write numbers to at least 100 in numerals and in words • Use place value & number facts to solve problems.	and subtraction, using concrete objects and pictorial representations and missing number problems **Year 2** • Solve problems with addition and subtraction, using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods • 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 representations, and mentally, including: o a two-digit number and ones o a two-digit number and tens o two two-digit numbers o 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 D • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	
At lower Key Stage 2	**Year 3** • 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. **Year 4** • Count in multiples of 6, 7, 9, 25 and 1000 • Find 1000 more or less than a given number • Count backwards through zero to include negative numbers • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • Order and compare numbers beyond 1000 • Identify, represent and estimate numbers using different representations • Round any number to the nearest 10, 100 or 1000	**Year 3** • Add and subtract numbers mentally, including: o a three-digit number and ones o a three-digit number and tens o a three-digit number and hundreds • 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. **Year 4** • 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.	*Solve addition and problems that involve missing numbers.

	• Solve number and practical problems that involve all of the above and with increasingly large positive numbers • Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.		
At upper Key Stage 2	**Year 5** • Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • Count forwards or backwards in steps of powers of 10 for any given number up to 1, 000, 000 • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Solve number problems and practical problems that involve all of the above • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. **Year 6** • Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • Round any whole number to a required degree of accuracy • Use negative numbers in context, and calculate intervals across zero • Solve number and practical problems that involve all of the above.	**Year 5** • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • Add and subtract numbers mentally with increasingly large numbers • 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. **Year 6** • 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 all 4 operations • Use estimation to check answers to calculations and determine an appropriate degree of accuracy for a problem	• Use simple formulae. • Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables.
Vocabulary			
At EYFS	zero, number one, two, three … to twenty and beyond teens numbers, eleven, twelve … twenty none how many …? count, count (up) to, count on (from, to), count back (from, to)	add, more, and make, sum, total altogether	n/a

	count in ones, twos, fives, tens is the same as, more, less, odd, even few pattern, pair ones, tens, digit the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more one less, ten less compare, order, size first, second, third… twentieth last, last but one before, after, next, between	double one more, two more … ten more how many more to make …? how many more is … than …? how much more is …? take away how many are left/left over? how many have gone? one less, two less, ten less … how many fewer is … than …? how much less is …? difference between	
At Year 1	numeral twenty-one, twenty-two … one hundred forwards backwards equal to, equivalent to most, least, many multiple of equal to half-way between above, below	addition near double half halve subtract equals, is the same as number bonds/pairs missing number	n/a
At Year 2	two hundred … one thousand count in threes, fours and so on tally sequence, continue, predict rule > greater than, < less than	one hundred more one hundred less facts tens boundary	n/a

	hundreds one-, two- or three-digit number place, place value stands for represents exchange twenty-first, twenty-second …		
At Year 3	count in eights, fifties and so on to hundreds factor of relationship Roman numerals one hundred more, one hundred less	missing numbers, hundreds boundary	*n/a*
At Year 4	ten thousand, hundred thousand, million count in sixes, sevens, nines, twenty-fives next, consecutive integer, positive, negative above/below zero, minus, negative numbers one thousand more, one thousand less	inverse	*n/a*
At Year 5	factor pair ≥ greater than or equal to ≤ less than or equal to formula, divisibility, square number, prime number ascending/descending order	ones, boundary, tenths boundary	*n/a*
At Year 6	factorise, prime factor, digit total	*n/a*	formula, formulae, equation, unknown, variable