Maths
Whole School Progressions of Skills & Knowledge

Brownhills West Primary School

I can...	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number - number and place value							
Counting	I can count up to three or four objects by saying one number name for each item. I can count actions and objects which cannot be moved. I can count objects to 10 and begin to count beyond 10. I can count out up to six objects from a larger group. I can count an irregular arrangemtn of up to ten objects. *ELG – I can count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.	I can count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number I can count in multiples of twos, fives and tens	I can count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	I can count from 0 in multiples of 4, 8, 50 and 100 I can count up and down in tenths	I can count in multiples of 6, 7, 9, 25 and 1000 I can count backwards through zero to include negative numbers I can count up and down in hundredths	I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 I can count forwards and backwards in decimal steps	I can count forwards or backwards in steps of integers, decimals or powers of 10 for any number.
Place Value	I can recognise numerals 1 to 5. I can select the correct numeral to represent 1 to 5, then 1 to 10 objects. I can record and use marks which I can interpret and explain.	I can read and write numbers to 100 in numerals I can read and write numbers from 1 to 20 in numerals and words I can begin to recognise the place value of numbers beyond 20 (tens and ones)	I can read and write numbers to at least 100 in numerals and in words I can recognise the place value of each digit in a two-digit number (tens, ones)	I can read and write numbers up to 1000 in numerals and in words I can read and write numbers with one decimal place I can recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	I can read and write numbers to at least 10 000 I can read and write numbers with up to two decimal places I can recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	I can read and write numbers to at least 1 000 000 I can read and write numbers with up to three decimal places I can determine the value of each digit in numbers to at least 1 000 000	I can read and write numbers up to 10 000 000 I can determine the value of each digit in numbers up to 10 000 000

				I can Identify the value of each digit to one decimal place	I can identify the value of each digit to two decimal places	I can dentify the value of each digit to three decimal places	I can identify the value of each digit to three decimal places
			I can partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13)	I can partition numbers in different ways (for example, 146 = 100 + 40 + 6 & 146 = 130 + 16)	I can partition numbers in different ways (for example, 2.3 = 2 + 0.3 and 2.3 = 1 + 1.3)		
		I can identify and represent numbers using objects and pictorial representations including the number line	I can identify, represent and estimate numbers using different representations, including the number line	I can identify, represent and estimate numbers using different representations, including the number line	I can identify, represent and estimate numbers using different representations, including the number line	I can identify, represent and estimate numbers using the number line	I can identify, represent and estimate numbers using the number line
Comparing and ordering	I can compate two groups of objects, saying when they have the same number. I can use language of 'more' and 'fewer' to compare two sets of objects.	I can use the language of: equal to, more than, less than (fewer), most, least	I can compare and order numbers from 0 up to 100; use <, > and = signs	I can compare and order numbers up to 1000	I can order and compare numbers beyond 1000	I can order and compare numbers to at least 1 000 000	I can order and compare numbers up to 10 000 000
				I can compare and order numbers with one decimal place	I can order and compare numbers with the same number of decimal places up to two decimal places	I can order and compare numbers with up to three decimal places	I can order and compare numbers including integers, decimals and negative numbers
		I can when given a number, identify one more and one less	I can find 1 or 10 more or less than a given number	I can find 1, 10 or 100 more or less than a given number	I can find 0.1, 1, 10, 100 or 1000 more or less than a given number	I can find 0.01, 0.1, 1, 10, 100, 1000 and other powers of 10 more or less than a given number	I can find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more or less than a given number
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number - number and place value							
Rounding, approximation and estimation	I can estimate how many objects they can see and checks by counting them.		I can round numbers to at least 100 to the nearest 10	I can round numbers to at least 1000 to the nearest 10 or 100	I can round any number to the nearest 10, 100 or 1000	I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	I can round any whole number to a required degree of accuracy
					I can round decimals with one decimal place to the nearest whole number	I can round decimals with two decimal places to the nearest whole number and to one decimal place	I can round decimals with three decimal places to the nearest whole number or one or two decimal places
Multiplying by powers of 10			I can understand the connection between the	I can find the effect of multiplying a one- or	I can find the effect of dividing a one- or two-	I can multiply and divide whole numbers	I can multiply and divide numbers by 10,

			10 multiplication table and place value	two-digit number by 10 and 100, identify the value of the digits in the answer	digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	and those involving decimals by 10, 100 and 1000	100 and 1000 giving answers up to three decimal places
Negative numbers					I can count backwards through zero to include negative numbers (see counting)	I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero	I can use negative numbers in context, and calculate intervals across zero
Sequences and patterns		I can recognise and create repeating patterns with numbers, objects and shapes I can identify odd and even numbers linked to counting in twos from 0 and 1	I can describe and extend simple sequences involving counting on or back in different steps	I can describe and extend number sequences involving counting on or back in different steps	I can describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps	I can describe and extend number sequences including those with multiplication and division steps and those where the step size is a decimal	I can describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal
Roman numerals				I can read Roman numerals from I to XII (see time)	I can 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	I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals	
Solving number problems		I can solve problems and practical problems involving all of the above	I can solve place value and number facts to solve problems	I can solve number problems and practical problems involving these ideas	I can solve number and practical problems that involve all of the above and with increasingly large positive numbers	I can solve number problems and practical problems that involve all of the above	I can solve number and practical problems that involve all of the above

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number - addition and subtraction							
Understanding addition and subtraction	I can find the total number of items in two groups by counting all of		I can choose an appropriate strategy to solve a calculation based upon the numbers	I can choose an appropriate strategy to solve a calculation based upon the	I can choose an appropriate strategy to solve a calculation based upon the	I can choose an appropriate strategy to solve a calculation based upon the	I can choose an appropriate strategy to solve a calculation based upon the

	them. I can say the number that is one more than a given number. I can find one more or one less from a group of up to five objects, then the objects. I am beginning to use the vocabulary involving addition and subtraction. *ELG – I can use quantities and objects to add and subtract two single-digit numbers and count on or back to find the answer.	I can read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	involved (recall a known fact, calculate mentally, use a jotting) I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot I can understand subtraction as take away and difference (how many more, how many less/fewer)	numbers involved (recall a known fact, calculate mentally, use a jotting, written method) I can understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context	numbers involved (recall a known fact, calculate mentally, use a jotting, written method)	numbers involved (recall a known fact, calculate mentally, use a jotting, written method)	numbers involved (recall a known fact, calculate mentally, use a jotting, written method)
Addition and subtraction facts		I can represent and use number bonds and related subtraction facts within 20	I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 I can recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes)	I can recall and use addition and subtraction facts for 100 (multiples of 5 and 10) I can derive and use addition and subtraction facts for 100 I can derive and use addition and subtraction facts for multiples of 100 totalling 1000	I can recall and use addition and subtraction facts for 100 I can recall and use addition and subtraction facts for multiples of 100 totalling 1000 I can derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)	I can recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place) I can rerive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)	I can recall and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)
Mental methods		I can add and subtract one-digit and two-digit	I can select a mental strategy appropriate for the numbers involved in the calculation I can add and subtract numbers using concrete	I can select a mental strategy appropriate for the numbers involved in the calculation I can add and subtract numbers mentally,	I can select a mental strategy appropriate for the numbers involved in the calculation I can add and subtract mentally combinations	I can select a mental strategy appropriate for the numbers involved in the calculation I can add and subtract numbers mentally with	I can select a mental strategy appropriate for the numbers involved in the calculation I can perform mental calculations, including

		numbers to 20, including zero (using concrete objects and pictorial representations)	objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers	including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds	of two and three digit numbers and decimals to one decimal place	increasingly large numbers and decimals to two decimal places	with mixed operations and large numbers and decimals
Written methods		*Written methods are informal at this stage – see mental methods for expectation of calculations	*Written methods are informal at this stage – see mental methods for expectation of calculations	I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	I can add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate	I can add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction)	I can add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)
Estimating and checking calculations	*ELG – I can estimate a number of objects and check quantities by counting up to 20.		I can recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	I can estimate the answer to a calculation and use inverse operations to check answers	I can estimate and use inverse operations to check answers to a calculation	I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
Order of operations							I can use their knowledge of the order of operations to carry out calculations involving the four operations
Solving addition and subtraction problems including those with missing numbers	I can begin to identify my own mathematical problems based on my own interests and fascinations.	I can solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9	I can solve problems with addition and subtraction including those with missing numbers: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures	I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why I can solve addition and subtraction problems	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why I can solve addition and subtraction problems involving	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why I can solve problems involving addition, subtraction,

			- applying their increasing knowledge of mental and written methods		involving missing numbers	missing numbers	multiplication and division, including those with missing numbers

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number - multiplication and division							
Understanding multiplication and division	I can separate a group of three or four objects in different wats, beginning to recognise that the total is still the same. *ELG – I can solve problems including doubling, halving and sharing. *ELG – I can solve proactical problems that involve combining groups of 2, 5 or 10 or sharing into equal groups.		I can understand multiplication as repeated addition I can understand division as sharing and grouping and that a division calculation can have a remainder I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	I can choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method) I can understand that division is the inverse of multiplication and vice versa I can understand how multiplication and division statements can be represented using arrays I can understand division as sharing and grouping and use each appropriately	I can choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method) I can recognise and use factor pairs and commutativity in mental calculations	I can choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method) I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	I can choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method)
Multiplication and division facts			I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	I can recall multiplication and division facts for multiplication tables up to 12 × 12	I can use and know the vocabulary of prime numbers, prime factors and composite (non-prime) numbers I can establish whether a number up to 100 is prime and recall prime numbers up to 19 I can recognise and use square numbers and cube numbers,	I can identify common factors, common multiples and prime numbers

		I can recall and use doubles of all numbers to 10 and corresponding halves	I can derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10) I can derive and use halves of simple two-digit even numbers (numbers in which the tens are even)	I can derive and use doubles of all numbers to 100 and corresponding halves I can derive and use doubles of all multiples of 50 to 500	I can use partitioning to double or halve any number, including decimals to one decimal place	and the notation for squared (^{2}) and cubed (^{3}) I can use partitioning to double or halve any number, including decimals to two decimal places	I can use partitioning to double or halve any number

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number - multiplication and division							
Mental methods			I can calculate mathematical statements for multiplication (using repeated addition) and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	I can 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 methods	I can 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	I can multiply and divide numbers mentally drawing upon known facts I can solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	I can perform mental calculations, including with mixed operations and large numbers
Written methods		*Written methods are informal at this stage – see mental methods for expectation of calculations	*Written methods are informal at this stage – see mental methods for expectation of calculations	I can write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, progressing to formal written methods I can write and calculate mathematical statements for division using the multiplication	I can multiply two-digit and three-digit numbers by a one-digit number using formal written layout I can divide numbers up to 3 digits by a one-digit number using the formal written method of short	I can 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 I can divide numbers up to 4 digits by a one-digit number using the formal written method	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Multiply one-digit numbers with up to two decimal places by whole numbers I can divide numbers up to 4 digits by a two-digit number using the formal written method

				tables that they know, including for two-digit numbers divided by one-digit numbers, progressing to formal written methods	division and interpret remainders appropriately for the context	of short division and interpret remainders appropriately for the context	of short division where appropriate, interpreting remainders according to the context I can use written division methods in cases where the answer has up to two decimal places
Estimating and checking calculations				I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	I can use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	I can use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	I can use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
Order of operations							I can use my knowledge of the order of operations to carry out calculations involving the four operations

Solving multiplication and division problems including those with missing numbers		I can 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	I can solve problems involving multiplication and division *(including those with remainders),* using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	I can solve problems, including missing number problems, involving multiplication and division *(and interpreting remainders)*, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	I can solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, *division (including interpreting remainders),* integer scaling problems and harder correspondence problems such as n objects are connected to m objects	I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	I can solve problems involving addition, subtraction, multiplication and division

Maths
Whole School Progressions of Skills & Knowledge

Brownhills West Primary School

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number – fractions (including decimals and percentages)							
Understanding fractions		*I can understand that a fraction can describe part of a whole* *I can nderstand that a unit fraction represents one equal part of a whole*	*I can understand and use the terms numerator and denominator* *I can understand that a fraction can describe part of a set* *I can understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be*	*I can show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as 3 ÷ 4)* *I can understand that finding a fraction of an amount relates to division*	*I can understand that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as 3 ÷ 4)*		
Fractions of objects, shapes and quantities		I can recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure) I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure)	I can recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity	I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators I can recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10	I can recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators I can recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten	I can recognise mixed numbers and improper fractions and convert from one form to the other I can read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$)	
Counting, comparing and ordering			*I can count on and back in steps of $\frac{1}{2}$ and $\frac{1}{4}$*	*I can count on and back in steps of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$*	*I can count on and back in steps of unit fractions*	*I can count on and back in mixed number steps such as $1\frac{1}{2}$*	

fractions				I can compare and order unit fractions and fractions with the same denominators *(including on a number line)*	*I can compare and order unit fractions and fractions with the same denominators (including on a number line) (continued from Year 3)*	I can compare and order fractions whose denominators are all multiples of the same number *(including on a number line)*	I can compare and order fractions, including fractions >I *(including on a number line)*

	Reception	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
Number – fractions (including decimals and percentages)							
Equivalence			I can write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	I can recognise and show, using diagrams, equivalent fractions with small denominators	I can recognise and show, using diagrams, families of common equivalent fractions I can recognise and write decimal equivalents of any number of tenths or hundredths I can recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$	I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts I can associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)
Calculating with fractions				I can add and subtract fractions with the same denominator within one whole *(using diagrams)* (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	I can add and subtract fractions with the same denominator *(using diagrams)*	I can add and subtract fractions with the same denominator and denominators that are multiples of the same number *(using diagrams)* I can write mathematical statements >I as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)	I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

						I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	I can multiply simple pairs of proper fractions, writing the answer in its simplest form *(using diagrams)* (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) I can divide proper fractions by whole numbers *(using diagrams)* (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number – fractions (including decimals and percentages)							
Percentages						I can 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	*I can find simple percentages of amounts*
Solving problems involving fractions, decimals and percentages				I can solve problems that involve all of the above	I can 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 I can solve simple measure and money problems involving fractions and decimals to two decimal places	*I can solve problems involving fractions* I can solve problems involving number up to three decimal places I can solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those with a denominator of a multiple of 10 or 25	*I can solve problems involving fractions* I can solve problems which require answers to be rounded to specified degrees of accuracy I can solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Ratio and proportion							
Ratio and proportion							I can solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples I can solve problems involving similar shapes where the scale factor is known or can be found
Algebra							
Algebra							I can express missing number problems algebraically I can use simple formulae I can generate and describe linear number sequences I can find pairs of numbers that satisfy an equation with two unknowns I can enumerate possibilities of combinations of two variables

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement (length/height, perimeter, area and mass/weight)							
Length / height	I can order two or three items by length or height. *ELG – I can use everyday language to talk about size and distance. *ELG – I can estimate, meausure and compare and order objects and talk about properties.	I can measure and begin to record lengths and heights, *using non-standard and then manageable standard units (m and cm) within children's range of counting competence* I can compare and describe lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)	I can choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit using rulers I can compare and order lengths and record the results using >, < and =	I can measure, add and subtract lengths (m/cm/mm) I can compare lengths (m/cm/mm)	I can estimate and calculate lengths I can compare lengths	*I can use, read and write standard units of length to a suitable degree of accuracy* I can understand and use approximate equivalences between metric and common imperial units such as inches	I can use, read and write standard units of length using decimal notation to three decimal places
Perimeter				*I can understand that perimeter is a measure of distance around the boundary of a shape* I can measure the perimeter of simple 2-D shapes	I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	I can recognise that shapes with the same areas can have different perimeters and vice versa
Area					*I can understand that area is a measure of surface within a given boundary* I can find the area of rectilinear shapes by counting squares	I can calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	I can calculate the area of parallelograms and triangles I can recognise when it is possible to use the formulae for area and volume of shapes
Mass	I can order two items by weight *ELG – I can use everyday language to talk about weight.	I can measure and begin to record mass/weight, *using non-standard and then standard units (kg and g) within children's range of counting competence*	I can choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales	I can measure, add and subtract mass (kg/g)	I can estimate and calculate mass	*I can use, read and write standard units of mass to a suitable degree of accuracy*	I can use, read and write standard units of mass using decimal notation to three decimal places

	*ELG – I can estimate, meausure, weigh and compare and order objects and talk about properties.	I can compare and describe mass/weight (for example, heavy/light, heavier than, lighter than)	I can compare and order mass and record the results using >, < and =	I can compare mass (kg/g)	I can compare mass	I can understand and use approximate equivalences between metric and common imperial units such as pounds	

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement (capacity, volume, temperature and conversion)							
Capacity / volume	I can order tow items by capacity. *ELG – I can use everyday language to talk about capacity. *ELG – I can estimate, meausure and compare and order objects and talk about properties.	I can measure and begin to record capacity and volume *using non-standard and then standard units (litres and ml) within children's range of counting competence*	I can choose and use appropriate standard units to estimate and measure capacity and volume (litres/ml) to the nearest appropriate unit using measuring vessels	I can measure, add and subtract volume/capacity (l/ml)	I can estimate and calculate volume/capacity	I can estimate *(and calculate)* volume (for example, using I cm^3 blocks to build cuboids (including cubes)) and capacity (for example, using water) *I can understand the difference between liquid volume, including capacity and solid volume*	I can use, read and write standard units of volume using decimal notation to three decimal places I can calculate and estimate volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units (for example, mm^3 and km^3)
		I can compare and describe capacity and volume (for example, full/empty, more than, less than, half, half full, quarter)	I can compare and order volume/capacity and record the results using >, < and =	I can compare volume/capacity (l/ml)	I can compare volume/capacity	I can understand and use approximate equivalences between metric and common imperial units such as pints	I can compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3) and extending to other units (for example, mm^3 and km^3)
Temperature			I can choose and use appropriate standard units to estimate and measure temperature to the nearest degree (°C) using thermometers	*I can continue to estimate and measure temperature to the nearest degree (°C) using thermometers*	*I can order temperatures including those below 0°C*	*I can continue to order temperatures including those below 0°C*	*I can calculate differences in temperature, including those that involve a positive and negative temperature*

Conversion					I can convert between different units of measure (e.g. kilometre to metre; hour to minute)	I can convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	I can 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 three decimal places I can convert between miles and kilometres

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			Measurement (time)				
Time	I can use everyday language related to time. I can order and sequeuence familiar events. I can measure short periods of time in simple ways. *ELG – I can use everyday language to talk about time to compare quantities and objects to solve problems. *ELG – I can estimate, meausure and compare and order objects and talk about time.	I can recognise and use language relating to dates, including days of the week, weeks, months and years I can compare and describe time (for example, quicker, slower, earlier, later) I can sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening I can measure and begin to record time (hours, minutes, seconds) I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	I can compare and sequence intervals of time I know the number of minutes in an hour and the number of hours in a day I can tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show	I can 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 I Know the number of seconds in a minute, and the number of days in each month, year and leap year I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24- hour clocks	I can convert between different units of time, e.g. hour to minute I can read, write and convert time between analogue and digital 12 and 24-hour clocks	*I can convert between units of time in a problem solving context* *I can continue to read, write and convert time between analogue and digital 12 and 24-hour clocks*	I can use, read and write standard units of time

			these times	I can estimate and read time with increasing accuracy to the nearest minute I can compare durations of events (for example to calculate the time taken by particular events or tasks)			

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement (money and solving problems)							
Money	I can begin to use everyday language related to money. *ELG – I can use everyday language to talk about money to compare quantities and objects and solve problems.	I can recognise and know the value of different denominations of coins and notes	I can recognise and use symbols for pounds (£) and pence (p) I can combine amounts to make a particular value I can find different combinations of coins that equal the same amounts of money I can add and subtract money of the same unit, including giving change	I can continue to recognise and use symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence I can recognise that ten 10p coins are equivalent to £1 and that each coin is $\frac{1}{10}$ of £1 I can add and subtract amounts of money to give change, using both £ and p in practical contexts	I can write amounts of money using decimal notation I can recognise that one hundred 1p coins are equivalent to £1 and that each coin is $\frac{1}{100}$ of £1 I can estimate, compare and calculate money in pounds and pence		
Solving problems involving money and measures		I can solve practical problems for: - lengths and heights - mass/weight - capacity and volume - time	I can solve simple problems in a practical context involving addition and subtraction of money *and measures (including time)*	*I can solve problems involving money and measures and simple problems involving passage of time*	I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days *and problems involving money and measures*	I can use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling I can solve problems involving converting between units of time	I can solve problems involving the calculation and conversion of units of measure *(including money and time)*, using decimal notation up to three decimal places where appropriate

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry - properties of shapes							
Properties of shape	I can begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes. I can select a particular named shape. I can explore everyday characteristics of everyday objects and shapes and use mathematical language to describe them.	I can recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles	I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line I can identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid)	I can draw 2-D shapes and describe them	I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes I can identify lines of symmetry in 2-D shapes presented in different orientations I can complete a simple symmetric figure with respect to a specific line of symmetry	I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles	I can compare and classify geometric shapes based on their properties and sizes I can draw 2-D shapes using given dimensions and angles
				I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines	*I can continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines*	I can use the properties of rectangles to deduce related facts and find missing lengths and angles	I can illustrate and name parts of circles, including radius, diameter and circumference and
		I can recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres	I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	I can make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	I can compare and classify geometric shapes based on their properties and sizes	I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations	I can recognise, describe and build simple 3-D shapes, including making nets

Angles and rotation		I can describe movement, including whole, half, quarter and three-quarter turns	I can use mathematical vocabulary to describe movement, including rotation as a turn I can understand the link between rotation and turns in terms of right angles for quarter, half and three- quarter turns (clockwise and anti-clockwise)	I can recognise angles as a property of shape or a description of a turn I can 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	I can identify acute and obtuse angles and compare and order angles up to two right angles by size	I Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles I can draw given angles, and measure them in degrees (°) Identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and ½ a turn (total 180°) - other multiples of 90°	I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles I can find unknown angles in any triangles, quadrilaterals, and regular polygons
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry - position and direction							
Patterns	I can use familiar objects and common shapes to create and recreate patterns and build models. *ELG - I can recognise, create and describe patterns.	*I can recognise and create repeating patterns with objects and shapes*	I can order and arrange combinations of mathematical objects in patterns and sequences				
Position and direction	I can describe relative position such as 'behind' or 'next to'. *ELG – I can use	I can describe position and direction	I can use mathematical vocabulary to describe position, movement, including movement in a straight line				

	everyday language to talk about position.						
Coordinates (including reflection and translation)				*I can describe positions on a square grid labelled with letters and numbers*	I can describe positions on a 2-D grid as coordinates in the first quadrant I can plot specified points and draw sides to complete a given polygon I can describe movements between positions as translations of a given unit to the left/right and up/down	*I can describe positions on the first quadrant of a coordinate grid* *I can plot specified points and complete shapes* I can 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	I can describe positions on the full coordinate grid (all four quadrants) I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statistics							
Sorting and classifying		I can sort objects, numbers and shapes to a given criterion and their own	I can compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects	I can use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects	I can use a variety of sorting diagrams to compare and classify numbers and geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	I can complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)	I can continue to complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)
Present and interpret data		I can present and interpret data in block diagrams using practical equipment	I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables	I can interpret and present data using bar charts, pictograms and tables	I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	I can complete, read and interpret information in tables, including timetables	I can interpret and construct pie charts and line graphs and use these to solve problems

Solve problems using data		I can csk and answer simple questions by counting the number of objects in each category I can ask and answer questions by comparing categorical data	I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity I can ask and answer questions about totalling and comparing categorical data	I can 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	I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	I can solve comparison, sum and difference problems using information presented in all types of graph including a line graph	I can solve comparison, sum and difference problems using information presented in all types of graph
Averages						I can calculate and interpret the mode, median and range	I can calculate and interpret the mean as an average