Early Maths

Nursery Entry	M1 - Notices significant numerals (number symbols)
	M2 - Uses some language of quantities, such as 'more' and 'a lot'.
	M3 - Uses some number names accurately in play, number rhymes and stories.
	M4 - recites number 0-5 in order
	M5 - subitises numbers 1-3 (3ness of 3)
Mid Nursery	M6 - counts 3 object with 1:1 correspondence
	M7 - recites numbers 0-10
	M8 - Beginning to represent numbers using fingers, pictures or objects
	M9 -Sometimes matches numeral and quantity correctly 0-5
	M10 - Compares two groups of objects, saying when they have the same number
	M11 - subitises numbers 1-3 without counting
	M12 - recognises numerals 1-3
	M13 - knows not only objects, but anything can be counted, including steps, claps or jumps.
	M14 - uses number names and language in play and rhymes
Nursery Exit	M15 - subitise 1-5
	M16 - Count 5 objects with 1:1 correspondence
	M17 - say one more / one less than a number to 5
	M18 - recognise numerals 0-5
	M19 - uses numbers in play problems
	M20 - count actions or objects which cannot be moved to 5
	M21 - uses marks and signs to show mathematical thinking
Mid Reception	M22 - matches quantities with numbers to 10
	M23 - Counts objects to 10, and beginning to count beyond 10.
	M24 - Count ten objects from a larger set
	M25 - Uses the language of 'more' and 'fewer' to compare two sets of objects
	M26 - Says the number that is one more than a given number
	M27 - Finds one more or one less from a groups of 6-10 objects
	M28 - Finds the total number of items in two groups by counting all of them
	M29 - begins to use everyday language related to money
Reception Exit	N1 - Have a deep understanding of number to 10, including the composition of each number;
	N2 - Subitise (recognise quantities without counting) up to 5
	N3 - 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
	NP1 - Verbally count beyond 20, recognising the pattern of the counting system
	NP2 - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
	NP3 - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Maths KS1

Year 1

NPV1 - Read and write numbers from 1 to 20 in numerals (1NPV1)

NPV2 - Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. (AS2 / NPV2)

NPV 3 - Represent and use number bonds and related subtraction facts within 20. (AF1, NF1, AS1)

NPV 4 - Add and subtract one-digit and two-digit numbers to 20, including zero. (AF1, NF1, AS1)

NPV 5 - count in multiples of 2s, 5s and 10s (NF2)

NPV 6 - recognise odd and even numbers (AS1)

NPV 7 - given a number, identify 1 more and 1 less (NF1 , NF2)

NPV 8 - count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (NPV1)

NAS1 - Recognise, find and name a half as one of two equal parts of an object, shape or quantity. (school)

NAS2 - Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. (school)

NAS3 - Measure and begin to record the following: lengths and heights (NPV2)

NF1 - Measure and begin to record the following: mass/weight (NPV2)

NF2 - Measure and begin to record the following: capacity and volume (NPV2)

M1 - Measure and begin to record the following: time (hours, minutes, seconds) (NPV2)

M2 - Recognise and know the value of different denominations of coins and notes (life)

M3 - Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]. (life)

M4 - Recognise and use language relating to dates, including days of the week, weeks, months and years. (life)

M5 - Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. (life)

GPS1 - Recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] (G1)

GPS2 - Recognise and name common 3-D shapes,[for example, cuboids (including cubes), pyramids and spheres]. (G1)

GPM1 - describe position, direction and movement, including whole, half, quarter and three-quarter turns. (G2)

Year 2

NPV1 - Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. (NPV1, NPV2)

NPV2 -Recognise the place value of each digit in a two-digit number (tens, ones). (NPV1)

NPV3 - Use place value and number facts to solve problems. (NPV1, NF2)

NAS1 -Recall and use addition and subtraction facts to 20 fluently (AS1)

NAS2 - Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones (AS2, AS3)

NAS3 - Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers (AS2, AS4)

NAS4 - Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. (AS3)

NMD1 - Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. (NPV2)

NMD2 - Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. (MD1, MD2)

NMD3 - Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. (MD1, MD2)

NF1 - Recognise, find, name and write fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, set of objects or quantity. (school)

M1 - Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit. (life)

M2 - Find different combinations of coins that equal the same amounts of money. (life)

M3 - Tell and write the time to fifteen minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. (life)

GPS1 - Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line (G1)

GPS2 - Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. (G1)

GPD1 - Use mathematical vocabulary to describe position, direction and movement, including in a straight line & distinguishing between rotation as a turn - right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise). (life)

S1 - Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. (NPV2, MD1)

Maths LKS2

Year 3

N1 -count from 0 in multiples of 4, 8, 50 and 100; finding 10 or 100 more or less than a given number (NPV3, NPV4)

N2 - Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) (NPV2)

N3 -Compare and order numbers up to 1000 (NPV2)

N4 - Identify, represent and estimate numbers using different representations (school)

N5 - Read and write numbers to at least 1000 in numerals and in words (NPV2)

N6 - Add and subtract mentally A three-digit number and ones (AS2 NF1 NF2)

N7 - Add and subtract mentally A three-digit number and tens (AS2 NF1 NF2)

N8 - Add and subtract mentally A three-digit number and hundreds (AS2 NF1 NF2)

N9 - Add and subtract numbers with up to three digits, using the efficient written methods of columnar addition and subtraction (AS2)

N10 -Recall and use multiplication and division facts for the 2,5,10, 3, 4 and 8 multiplication tables (F2, MD1)

F1 -Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 (F3)

F2 -Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

F3 -Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (F1)

F4 -Compare and order unit fractions with the same denominator (F3)

M1 -Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) (NPV2, NPV3)

M2 -Measure the perimeter of simple 2-D shapes (AS2)

M3 -Add and subtract amounts of money to give change, using both £ and p in practical contexts (AS2, NPV2)

M4 -Tell and write the time from an analogue clock, 12-hour and 24-hour clocks (life)

M5 -Know the number of seconds in a minute and the number of days in each month, year and leap year (life)

GS1 -Recognise angles as a property of shape and associate angles with turning (G1)

GS2 -Identify horizontal, vertical, perpendicular and parallel lines in relation to other lines (G2)

S1 - Interpret and present data using bar charts, pictograms and tables (school)

Year 4

NPV1 - Count in multiples of 6, 7, 9, 25 and 1000 (NPV1)

NPV2 - Find 1000 more or less than a given number (NPV3)

NPV3 - Count backwards through zero to include negative numbers (NPV3)

NPV4 - Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) (NPV2)

NPV5 -Order and compare numbers beyond 1000 (NPV3)

NPV6 - Identify, represent and estimate numbers using different representations (school)

NPV7 - Round any number to the nearest 10, 100 or 1000 (NPV3)

NAS1 - Add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate

NMD1 - Recall multiplication and division facts for multiplication tables up to 12 × 12 (NF1, D2)

NMD2 - 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 (MD1, NF2, MD3, NF1, NF2)

NMD3 - Multiply two-digit and three-digit numbers by a one-digit number using formal written layout (MD2)

NF1 - Recognise and show, using diagrams, families of common equivalent fractions (school)

NF3 - Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten (school)

NF3 - Add and subtract fractions with the same denominator (F3)

NF4 - Recognise and write decimal equivalents of any number of tenths or hundredths (school)

NF5 - Recognise and write decimal equivalents to 1/4; 1/2; 3/4 (school)

NF6 - 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 units, tenths and hundredths (NPV4)

NF7 -Compare numbers with the same number of decimal places up to two decimal places (school)

M1 - Convert between different units of measure (e.g. kilometre to metre; hour to minute)(life)

M2 - Estimate, compare and calculate different measures, including money in pounds and pence (life)

M3 - Read, write and convert time between analogue and digital 12 and 24-hour clocks (life)

GS1 - Identify lines of symmetry in 2-D shapes presented in different orientations (G3)

GS2 - Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. (G2)

GPD1 - Describe positions on a 2-D grid as coordinates in the first quadrant (G1)

GPD2 - Describe movements between positions as translations of a given unit to the left/right and up/down (school)

Maths UKS2

Year 5

NPV1 - Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (NPV2)

NPV 2 - Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero (NPV3)

NPV3 - Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 (NPV3)

NAS1 - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

NAS2 - Add and subtract numbers mentally with increasingly large numbers (NF2)

NMD1 - Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers (MD2)

NMD2 - 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 (MD3)

NMD3 - Multiply and divide numbers mentally drawing upon known facts (NF1)

NMD 4 - 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 (MD4)

NMD5 - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 (MD1)

NMD6 - Recognise and use square numbers and cube nu bers, and the notation for squared and cubed

NF1 - Compare and order fractions whose denominators are all multiples of the same number (F2)

NF2 - Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed numberexample, 5 (F2)

NF3 - Add and subtract fractions with the same denominator and denominators that are multiples of the same number (school)

NF4 - Read and write decimal numbers as fractions [for example, 0.71 = 71/100] (F3)

NF5 - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (school)

NF6 - Recognise and use thousandths and relate them to tenths hundredths and decimal equivalents (NPV1)

NF7 - Round deciamals with two decimal places to the nearest whole number and to one decimal place (NPV3)

NF8 - Read, write, order and compare numbers with up to 3 decimal places (NPV3)

NF9 - Recognise the percent sign and understand that per cent relates to the number of parts per 100, and write percentages as a fraction with the denominator 100, and as a decimal (life)

M1 - Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres (G2, NPV6)

M2 - Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes (G2, NPV5, NPV6)

M3 - Solve problems involving converting between units of time (life) (NPV6)

GPS1 - Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (G1)

GPS2 - Identify angles at a point and one whole turn; angles at a point on a straight line and half turn; other multiples of 90 degrees (G1)

GPS3 - Identify: angles at a point and one whole turn (total 360) (G1)

GPD1 -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. (school)

S1 - Complete, read and interpret information in tables, including timetables. (life) (NPV4)

Year 6

Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).

Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning.

Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.

Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).

Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.

Solve problems involving ratio relationships.

Solve problems with 2 unknowns.

Recognise when fractions can be simplified, and use common factors to simplify fractions.

Express fractions in a common denomination and use this to compare fractions that are similar in value.

Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.

1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.