Maths Overview and Progression Grid

Communicators	Explorers	Readers	Believers
Children will use their communication skills to understand and answer Problem Solving and Reasoning questions	Children will explore the relevance and real life links that mathematics has to their daily lives.	We encourage children to read new vocabulary relating to mathematics. They will understand the meaning of key terminology and this will progress.	Children will be confident mathematicians who have the belief and resilience to grapple and persevere to complete Mathematical problems

EYFS	
Vocabulary	

Throughout Reception children will be exposed to Maths knowledge and skills	By the end of Reception children will be able to:
Exposure to a range of manipulatives to support counting Modelling and practising writing numbers Real – life maths skills through role play Teaching of mathematical concepts Opportunity to be use measure in water, mud and sand play Games and play relating to numbers and counting	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.
	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.
	I can recognise basic 2-d shapes (square, circle, triangle, rectangle)
	I understand language of measure (bigger, smaller, heavier, lighter, taller, shorter)
	I can continue a short repeating pattern with shapes and / or colours

FOCUS FIVE	I can recognise all numbers to 10	I can count to 20	I can count 1:1 correspondence with a set of 10 objects	I can tell you one more or one less than any number less than 10	I know 5 + 5 = 10

Year 1	Place Value, Numbers and Calculations		
Vocabulary			
Place Value	**Addition and Subtraction**	**Multiplication and Division**	**Fractions**
count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	add and subtract one-digit and two digit numbers to 20, including zero	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	recognise, find and name a half as one of two equal parts of an object, shape or quantity
Count numbers to 100 in numerals; count in multiples of twos, fives and tens	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = c – 9		recognise, find and name a quarter as one of four equal parts of an object, shape or quantity
identify and represent numbers using objects and pictorial representations			
read and write numbers to 100 in numerals			
Read and write numbers from 1 to 20 in numerals and words			
given a number, identify one more and one less			

FOCUS FIVE	I can form all my numbers correctly	I can recognise any number up to 100.	I can count in steps of 2, 5 and 10	I know all addition and subtraction facts for pairs to 20	I can recall all double numbers up to 10 + 10

Year 1	Measures inc money, Properties of Shape, Position and Direction, Algebra
Vocabulary	letter, capital letter, word, singular, plural, sentence, punctuation, full stop, question mark, exclamation mark

Measure	Properties of Shape	Position and Direction	Algebra
compare, describe and solve practical problems for: Ø lengths and heights Ø mass/weight Ø capacity and volume Ø time	recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]	describe position, direction and movement, including whole, half, quarter and three-quarter turns	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = c – 9
measure and begin to record the following: Ø lengths and heights Ø mass/weight Ø capacity and volume Ø time (hours, minutes, seconds)	recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]		
recognise and know the value of different denominations of coins and notes			
sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]			
recognise and use language relating to dates, including days of the week, weeks, 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			

FOCUS FIVE					
	I can tell the time to o'clock and half past	I know the days of the week and months of the year in sequence	I can recognise square, triangles, circles, rectangles, cubes, cuboids, pyramids and spheres	I can recognise all coins	I can compare the length of two objects

Year 2	Place Value, Numbers and Calculations		
Vocabulary			
Place Value	**Addition and Subtraction**	**Multiplication and Division**	**Fractions**
count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: Ø a two-digit number and ones Ø a two-digit number and tens Ø two two-digit numbers Ø adding three one digit numbers	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	recognise, find, name and write fractions 1/3, □, 2/4 and 3/4 of a length, shape, set of objects or quantity
read and write numbers to at least 100 in numerals and in words		show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	Recognise the equivalence of □ and 2/4
identify, represent and estimate numbers using different representations, including the number line	solve problems with addition and subtraction: Ø using concrete objects and pictorial representations, including those involving numbers, quantities and measures Ø applying their increasing knowledge of mental and written methods	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	write simple fractions for example, 1/2 of 6 = 3
recognise the place value of each digit in a two-digit number (tens, ones)		solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	
compare and order numbers from 0 up to 100; use and = signs			
use place value and number facts to solve problems			

FOCUS FIVE	I can order 4 numbers from 0 – 100	I know how to add multiples of ten to a given number (34 + 20)	I know my 2, 5 and 10 times tables	Use a number line	I can find a half or quarter of a set of objects

Year 2	Measures inc money, Properties of Shape, Position and Direction, Algebra			
Vocabulary				
Measure	**Properties of Shape**	**Position and Direction**	**Statistics**	**Algebra**
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, using rulers, scales, thermometers and measuring vessels	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line	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 anticlockwise)	interpret and construct simple pictograms, tally charts, block diagrams and simple tables	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
compare and order lengths, mass, volume/capacity and record the results using >, < and =	identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	order and arrange combinations of mathematical objects in patterns and sequences	ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	
recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	compare and sort common 2-D shapes and everyday objects		ask and answer questions about totalling and comparing categorical data	
find different combinations of coins that equal the same amounts of money	recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]			
solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	compare and sort common 3-D shapes and everyday objects			
compare and sequence intervals of time				
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				
know the number of minutes in an hour and the number of hours in a day				

FOCUS FIVE	Use coins to make any given amount of money	Tell the time using quarter to and quarter past	Know minutes in an hour and hours in a day	Understand full, half and quarter turns and use clockwise and anti clockwise	Know how to use a tally

Year 3	Place Value, Numbers and Calculations		
Vocabulary			
Place Value	**Addition and Subtraction**	**Multiplication and Division**	**Fractions**
count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	add and subtract numbers mentally, including: Ø a three-digit number and ones Ø a three-digit number and tens Ø a three-digit number and hundreds	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	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
identify, represent and estimate numbers using different representations		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	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
read and write numbers up to 1000 in numerals and in words	add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction		recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	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 positive integer scaling problems and correspondence problems in which n objects are connected to m objects	recognise and show, using diagrams, equivalent fractions with small denominators
compare and order numbers up to 1000			compare and order unit fractions, and fractions with the same denominators
solve number problems and practical problems involving these ideas			add and subtract fractions with the same denominator within one whole [for example, 1/7 + 5/7 = 6/7)
			solve problems that involve all of the above

FOCUS FIVE	I can read any number up to 1000	I know my 3,4 and 8 times tables	Add and subtract 3 digit numbers using the column method	Recognise what fraction of a shape is shaded	Double a 2 digit number mentally

Year 3	Measures inc money, Properties of Shape, Position and Direction, Algebra				
Vocabulary					
Measure	**Properties of Shape**	**Position and Direction**	**Statistics**	**Algebra**	**Perimeter, Area, Volume**
measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	draw 2-D shapes	identify horizontal and vertical lines and pairs of perpendicular and parallel lines	interpret and present data using bar charts, pictograms and tables	solve problems, including missing number problems	measure the perimeter of simple 2-D shapes
add and subtract amounts of money to give change, using both £ and p in practical contexts	make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	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	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		
tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	recognise angles as a property of shape or a description of a turn				
estimate and read time with increasing accuracy to the nearest minute; 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					
know the number of seconds in a minute and the number of days in each month, year and leap year					
compare durations of events [for example to calculate the time taken by particular events or tasks]					

FOCUS FIVE	I can find the perimeter of a shape by adding the sides	I can tell you the change from £1 or £5 or £10	I can tell the time to the nearest minute	I know the number of days in each month	I can identify a right angle

Year 4	Place Value, Numbers and Calculations
Vocabulary	

Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Decimals
count in multiples of 6, 7, 9, 25 and 1000	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	recall multiplication and division facts for multiplication tables up to 12 × 12	count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	recognise and write decimal equivalents of any number of tenths or hundredths
count backwards through zero to include negative numbers		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 show, using diagrams, families of common equivalent fractions	recognise and write decimal equivalents to 1/2, 1/4 and 3/4
identify, represent and estimate numbers using different representations	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	recognise and use factor pairs and commutativity in mental calculations	add and subtract fractions with the same denominator	round decimals with one decimal place to the nearest whole number
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		multiply two-digit and three-digit numbers by a one digit number using formal written layout	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	compare numbers with the same number of decimal places up to two decimal places
find 1000 more or less than a given number		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		solve simple measure and money problems involving fractions and decimals to two decimal places
recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)				
order and compare numbers beyond 1000				
round any number to the nearest 10, 100 or 1000				
solve number and practical problems that involve all of the above and with increasingly large positive numbers				

FOCUS FIVE	I can read any 4-digit numbers	I can read Roman Numerals	I know all my times tables	I know the decimal equivalents to 1/2, 3/4 and 1/4	I can half a given even number

Year 4	Measures inc money, Properties of Shape, Position and Direction, Algebra				
Vocabulary					
Measure	**Properties of Shape**	**Position and Direction**	**Statistics**	**Algebra**	**Perimeter, Area, Volume**
Convert between different units of measure [for example, kilometre to metre; hour to minute]	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	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs		measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
estimate, compare and calculate different measures	identify lines of symmetry in 2-D shapes presented in different orientations	identify lines of symmetry in 2-D shapes presented in different orientations	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs		find the area of rectilinear shapes by counting squares
estimate, compare and calculate different measures, including money in pounds and pence		complete a simple symmetric figure with respect to a specific line of symmetry			
read, write and convert time between analogue and digital 12- and 24-hour clocks		describe positions on a 2-D grid as coordinates in the first quadrant			
solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days		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			

FOCUS FIVE	I can give you the same measurement in m and cm	I can convert between analogue and digital times	I can recognise an obtuse and acute angle	I can count squares to find the area of a shape	I can convert hours to minutes

Year 5	Place Value, Numbers and Calculations
Vocabulary	

Place Value	Addition and Subtraction	Multiplication and Division	Multiplication and Division (2)	Fractions	Decimals and Percentages
count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	add and subtract whole numbers with more than 4 digits, including using formal written methods	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	multiply and divide numbers mentally drawing upon known facts	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	read and write decimal numbers as fractions [for example, 0.71 = 71/100]
count forwards and backwards with positive and negative whole numbers, including through zero interpret negative numbers in context	add and subtract numbers mentally with increasingly large numbers	know and use the vocabulary of prime numbers, prime factors and composite (nonprime) 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	recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit	solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why	establish whether a number up to 100 is prime and recall prime numbers up to 19	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	compare and order fractions whose denominators are all multiples of the same number	round decimals with two decimal places to the nearest whole number and to one decimal place
read Roman numerals to 1000 (M) and recognise years written in Roman numerals	solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	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	add and subtract fractions with the same denominator and denominators that are multiples of the same number	read, write, order and compare numbers with up to three decimal places
(read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit		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	solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	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
round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000			solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign		solve problems which require knowing percentage and decimal equivalents of (1/2, □, 1/5, 2/5, 4/5) and those fractions with a denominator of a multiple of 10 or 25

FOCUS FIVE	I can read all numbers up to 1,000,000	I can recall all prime numbers below 30	I can multiply and divide by 10 and 100 (inc decimals)	I can convert a mixed number to an improper and vice versa	I can recognise equivalent fractions, decimals and percentages (halves, quarters, fifths)

Year 5	Measures inc money, Properties of Shape, Position and Direction, Algebra				
Vocabulary					
Measure	**Properties of Shape**	**Position and Direction**	**Statistics**	**Algebra**	**Perimeter, Area, Volume**
convert between different units of metric measure	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	complete, read and interpret information in tables, including timetables		measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	use the properties of rectangles to deduce related facts and find missing lengths and angles	draw given angles, and measure them in degrees	solve comparison, sum and difference problems using information presented in a line graph		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
use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	identify: Ø angles at a point and one whole turn (total 360°) Ø angles at a point on a straight line and 1/2 a turn (total 180°) Ø other multiples of 90°			estimate volume [for example, using blocks to build cuboids] and capacity [for example, using water]
use all four operations to solve problems involving measure [for example, money]		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			
solve problems involving converting between units of time		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			

FOCUS FIVE	I can find the area of a rectangle	I can reflect a simple shape on a grid	I know the degrees in a full turn, half turn and quarter turn	I can measure an angle with a protractor	I can give you the same measurement in ml and l Or g and kg

Year 6	Place Value, Numbers and Calculations				
Vocabulary					
Place Value	**Addition and Subtraction**	**Multiplication and Division**	**Fractions**	**Decimals and Percentages**	**Ratio and Proportion**
read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit	perform mental calculations, including with mixed operations and large numbers	identify common factors, common multiples and prime numbers	use common factors to simplify fractions; use common multiples to express fractions in the same denomination	identify the value of each digit in numbers given to three decimal places	solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
(read, write), order and compare numbers up to 10 000 000 and determine the value of each digit	use their knowledge of the order of operations to carry out calculations involving the four operations	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	compare and order fractions, including fractions > 1	associate a fraction with division and calculate decimal fraction equivalents	solve problems involving the calculation/use of percentages for comparison
round any whole number to a required degree of accuracy	solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	solve problems involving similar shapes where the scale factor is known or can be found
use negative numbers in context, and calculate intervals across zero	perform mental calculations, including with mixed operations and large numbers	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	multiply simple pairs of proper fractions, writing the answer in its simplest form		solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
solve number and practical problems that involve all of the above	use their knowledge of the order of operations to carry out calculations involving the four operations	divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	divide proper fractions by whole numbers		
		perform mental calculations, including with mixed operations and large numbers			

FOCUS FIVE	I can use formal division	I can round decimals	I can simplify fractions	I can use formal multiplication	I can add and subtract two fractions with different denominators

Year 6	Measures inc money, Properties of Shape, Position and Direction, Algebra				
Vocabulary					
Measure	**Properties of Shape**	**Position and Direction**	**Statistics**	**Algebra**	**Perimeter, Area, Volume**
solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p. where appropriate	draw 2-D shapes using given dimensions and angles	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	interpret and construct pie charts and line graphs and use these to solve problems	use simple formulae	recognise that shapes with the same areas can have different perimeters and vice versa
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 3 d.p.	compare and classify geometric shapes based on their properties and sizes	describe positions on the full coordinate grid (all four quadrants)	calculate and interpret the mean as an average	generate and describe linear number sequences	recognise when it is possible to use formulae for area and volume of shapes
convert between miles and kilometres	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	draw and translate simple shapes on the coordinate plane, and reflect them in the axes		express missing number problems algebraically	calculate the area of parallelograms and triangles
use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa	recognise, describe and build simple 3-D shapes, including making nets			find pairs of numbers that satisfy an equation with two unknowns	calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units
	find unknown angles in any triangles, quadrilaterals, and regular polygons			enumerate possibilities of combinations of two variables	

FOCUS FIVE	I can read a co-ordinate in any quadrant	I can calculate the mean of a set of numbers	I know that the radius, diameter and circumference are	I know that there are 180^0 in a triangle	I know the formula for finding area and volume