



## Mathematics Progression of skills

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Number and place value</b>	Counting to 5	Numbers to 10	Counting and representing numbers to 100	Counting n 100s	Numbers to 1000	Numbers to 10,000	Reading, writing, ordering and comparing numbers to 10,000,000
	Showing interest/curiosity in number and offer comments and asking questions	Counting, identifying and representing numbers	Tens and ones	Representing numbers up to 1000	Rounding to the nearest 10, 100.	Rounding to the nearest 10, 100 and 1000	Knowing the value of digits in a number up to 10,000,000
	Comparing groups within 5 (identical and non-identical objects)	Writing numbers	Representing numbers on a place value grid	Place value within 1000 – 100s, 10s and 1s	Counting in 1000s	The number line to 100,000	Number line to 10,000,000
	Counting to 10 and counting to numbers within 10	Counting forwards and backwards	Comparing numbers	Number line to 1000 - 1, 10 and 100 more and less	Representing 4-digit numbers - 1000s, 100s, 10s and 1s	Comparing and ordering numbers to 100,000	Rounding numbers to 10,000,000
	Placing numbers in order	One more One less	Ordering numbers	Comparing and ordering numbers to 1000	Number line to 10,000	Rounding numbers within 100,000	Negative numbers and calculating intervals across zero
	Comparing numbers to 10	Comparing objects and numbers	Counting in 2s ,5s and 10s	Counting in 50s	Roman numerals to 100	Roman numerals to 10,000	
	Counting to 20	Ordering objects and numbers 1st, 2nd, 3rd 10	Counting in 3s		Finding 1000 more and less	100,000s, 10,000s, 1000s, 100s, 10s and 1s	
	Placing numbers in order	Introduction to the number line			Comparing 4-digit numbers	Number line to 1,000,000	
		Numbers to 20			Ordering numbers to 10,000	Comparing and ordering numbers to 1,000,000	
		Identifying, counting, representing and writing numbers to 20			Rounding to nearest 1000	Rounding numbers to 1,000,000	
	Tens and ones			Problem solving – rounding			
	Counting one more /less			Counting in 25s			
				Negative numbers			



	<p>Comparing numbers and objects</p> <p>Ordering numbers and objects</p> <p>Numbers to 50</p> <p>Tens and ones to 50</p> <p>Representing numbers to 50</p> <p>Comparing numbers and objects to 50</p> <p>Ordering numbers and objects to 50</p> <p>Counting in 2s and 5s</p> <p>Solving addition and subtraction one step word problems</p> <p>Using signs <math>&lt;</math> <math>&gt;</math> <math>=</math></p> <p>Numbers to 100</p> <p>Counting to 100</p> <p>Exploring number patterns</p> <p>Partitioning numbers</p> <p>Comparing numbers</p>				<p>Counting in 10s, 100s, 1000s, and 10,000s</p> <p>Number sequences</p>	
--	--	--	--	--	--	--



	Ordering numbers					
	Bonds to 100					

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Number: Addition and subtraction</b>	Sorting into two groups – exploring everyday objects	Part whole within 10 Using related facts	Related facts – addition/ subtraction Using number facts to check calculations	Adding and subtracting 100s Adding and subtracting 3-digit numbers and 1s and 10s	Adding and subtracting 1s, 10s, 100s and 1000s Adding two 4-digit numbers	Adding whole numbers with more than 4 digits Subtraction - whole numbers with more than 4 digits	Problem solving with addition and subtraction using written methods (multi step)
	Change within 5 – one more / one less	Reading, writing and interpreting mathematical statements + - =	Comparing number sentences	Adding and subtracting 3-digit numbers and 2-digit numbers	Subtracting two 4-digit numbers	Using rounding to estimate and check answers	
	Number bonds to 5 – Introduction to the part whole model (Pre-requisite – count on and back to find an answer and add and sub single digit numbers)	Representing and using number bonds Finding, comparing and making number bonds	Making number bonds to 10 Adding and subtracting Ones	Addition and subtraction patterns (adding 1, 10 and 100s)	Equivalent difference – subtraction Estimating answers - addition and subtraction	Mental addition and subtraction – partitioning / rounding and adjusting / counting on	
	Addition to 10 – combining two groups to find a whole	Addition within 10 Finding the whole - adding together	Finding 10 more / less Adding and subtracting tens	Adding two 3-digit numbers Subtracting a 3 digit from a 3 digit	Checking strategies – inverse operations Problem solving - addition and subtraction	Using inverse operations	
	Number bonds to 10	Finding the whole - adding more on Finding a part	Adding / subtracting 2- and 1-digit numbers Adding two 2-digit numbers	Estimating answers Checking strategies Solving problems		Problem-solving - addition and subtraction	
		Finding and making number bonds Finding addition facts	Subtracting 2-digit numbers				



<p>Using a ten frame</p> <p>The part whole model to 10 (Pre-requisite – count on and back to find an answer and add and sub single digit number)</p> <p>Adding by counting on</p> <p>Taking away by counting back</p>	<p>Solving addition one step word problems</p> <p>Reading, writing and interpreting mathematical statements + - =</p> <p>Subtraction within 10</p> <p>Subtraction - How many left?</p> <p>Subtraction - Breaking apart</p> <p>Related facts - addition and subtraction</p> <p>Subtraction - counting back</p> <p>Subtraction - Finding the difference</p> <p>Solving addition and subtraction one step word problems</p> <p>Comparing - addition and subtraction</p> <p>Reading, writing and interpreting mathematical statements + - =</p>	<p>Adding 3 one-digit numbers</p> <p>Solving word problems – bar model</p>				
---	---	--	--	--	--	--



		<p>Addition within 20</p> <p>Adding by counting on</p> <p>Adding ones</p> <p>Finding number bonds</p> <p>Adding by making ten</p> <p>Solving addition one step word problems</p> <p>Subtraction within 20</p> <p>Subtracting ones</p> <p>Subtracting tens and ones</p> <p>Subtraction – crossing ten</p> <p>Related addition and subtraction facts to 20</p> <p>Comparing addition and subtraction</p> <p>Solving one step subtraction / addition word and picture problems</p>					
--	--	---	--	--	--	--	--

# Mathematics Curriculum Overview



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Number: Multiplication and division</b>	Doubling		Making equal groups	Multiplication equal groups	Multiplying multiples of 10 and 100	Multiples	Multiplying 4-digit and 1-digit numbers
	Halving		Multiplication as equal groups	Multiplying and dividing by 3	Dividing multiples of 10 and 100	Factors	Multiplying 4 digit and 2-digit numbers (long multiplication)
	Sharing		Adding equal groups	3 times-table	Multiplying by 1 and 0	Prime numbers	Dividing 4-digit and 2-digit numbers (remainders / short division)
	Odd and even		Multiplication sentences	Multiplying and dividing by 4	Dividing by 1	Squares and cubes	Common factors
			Using arrays - 2, 5 and 10 times tables	4 times-table	Multiplying and dividing by 6	Inverse operations	Common multiples
			Solving word problems – multiplication	Multiplying and dividing by 8	6 times tables	Multiplying whole numbers by 10, 100, 1000	Prime numbers up to 100
			Division: Making equal groups	8 times-table	Multiplying and dividing by 9	Dividing whole numbers by 10, 100 and 1000	Squares and cubes
			Sharing equal groups	Problem solving – multiplication and division	9 times tables	Multiplying and dividing by multiples of 10,100 and 1000	Order of operations - brackets
			Dividing by 2 - Odd and even	Understanding divisibility	Multiplying and dividing by 7	Multiplying numbers up to 4 digits by 1 digit	Mental calculations (compensating)
			Divide by 5, 10	Related facts - multiplication and division	7 times table	Multiplying 2-digit numbers	Reasoning from known facts
		Bar modelling – grouping	Comparing multiplication and division statements	11 and 12 times tables	Multiplying a 3-digit number by a 2 digit		
		Bar modelling – sharing	Related multiplication and division calculation	Problem solving - additional and multiplication			
		Solving word problems – division		Problem solving – mixed			

## Mathematics Curriculum Overview



				<p>Multiplying 2-digit and 1-digit numbers</p> <p>Dividing 2-digit and 1-digit numbers</p> <p>How many ways? (finding all the possibilities – rules)</p> <p>Problem solving</p>	<p>Using written methods to multiply – expanded method/ partitioning</p> <p>Multiplying a 2- and 1-digit number</p> <p>Multiplying a 3- and 1-digit number</p> <p>Problem solving – multiplication</p> <p>Multiplying more than two numbers</p> <p>Problem solving – mixed correspondence problems</p> <p>Dividing a 2- and 1-digit numbers</p> <p>Division with remainders</p> <p>Dividing a 3-digit number by a 1-digit number</p> <p>Problem solving – division</p>	<p>Multiplying a 4-digit number by a 2-digit number</p> <p>Dividing a 4-digit number by a 1-digit number</p> <p>Division with remainders</p> <p>Problem solving – division with remainders</p>	
--	--	--	--	---	--	--	--

## Mathematics Curriculum Overview



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number: Fractions, decimal and percentages			Introducing parts and wholes	Unit and non-unit fractions	Tenths and hundredths	Equivalent fractions	Simplifying fractions
			Making equal parts	Making a whole	Equivalent fractions	Converting improper fractions to mixed numbers	Fractions on a number line
			Recognising and finding a half	Tenths	Simplifying fractions	Converting mixed numbers to improper fractions	Comparing and ordering fractions
			Recognising and finding a quarter	Fractions as number	Fractions greater than 1	Number sequences - fractions	Adding and subtracting fractions
			Unit fractions	Fractions of a set of objects	Adding fractions	Comparing and ordering fractions	Problem solving – adding and subtracting fractions
			Understanding other fractions - $\frac{1}{2}$ and $\frac{2}{4}$ equivalent	Problem solving fractions	Subtracting fractions	Fractions as division	Multiplying a fraction (proper and mixed) by a whole number
			Finding $\frac{3}{4}$	Equivalent fractions	Problem solving – adding and subtracting fraction	Adding and subtracting fractions with the same denominator	Multiplying a fraction by a fraction (simplest form)
			Understanding a whole and parts	Comparing fractions	Calculating fractions of a quantity	Adding and subtracting fractions	Dividing a fraction (proper) by a whole number
			Counting In halves and quarter	Ordering fractions	Problem solving – fractions of a quantity	Problem solving – mixed word problems – fractions	Using the four rules with fractions (correct order of operations)
				Adding fractions	Tenths	Multiplying fractions	Calculating fractions of amounts Using fractions as operators
			Subtracting fractions	Dividing by 10	Calculating fractions of amounts Using fractions as operators	Calculating fractions of an amount	
			Problem solving – adding and subtracting fractions	Hundredths			
			Problem solving – fractions of measure	Dividing by 100			
				Dividing by 10 and 100			
				Making a whole			
				Writing a decimal			



## Mathematics Curriculum Overview



					<p>Comparing a decimal</p> <p>Ordering a decimal</p> <p>Rounding a decimal</p> <p>Halves and quarters</p> <p>Problem solving with decimals</p>	<p>Problem solving – mixed word problems</p> <p>Writing decimals</p> <p>Decimals as fractions</p> <p>Understanding thousandths</p> <p>Writing thousands as decimals</p> <p>Ordering and comparing decimals</p> <p>Rounding decimals</p> <p>Understanding percentage</p> <p>Percentage as fractions and decimals</p> <p>Equivalent fractions, decimals and percentages</p> <p>Adding and subtracting decimals</p> <p>Decimal sequences</p> <p>Problem solving decimals</p> <p>Multiplying decimals by 10</p>	<p>Problem solving – fractions of amounts</p> <p>Multiplying by 10, 100 and 1000</p> <p>Dividing by multiples of 10, 100 and 1000</p> <p>Decimals as fractions</p> <p>Fractions as decimals</p> <p>Multiplying and dividing decimals</p> <p>Recalling and using equivalence between simple fractions, decimals and percentages</p> <p>Calculation of percentages</p> <p>Percentage for comparison</p> <p>Finding missing values</p> <p>Converting fractions to percentage</p> <p>Equivalent fractions, decimals and percentage</p>
--	--	--	--	--	--	---	--

## Mathematics Curriculum Overview



						<p>Multiplying decimals by 10, 100 and 1000</p> <p>Dividing decimals by 10</p> <p>Dividing decimals by 10, 100 and 1000</p>	Mixed problem solving
--	--	--	--	--	--	---	-----------------------

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number: Addition and subtraction. Problem solving and efficiency			<p>Problem solving with money</p> <p>Using numbers facts and equivalence</p> <p>Using a 100 square</p> <p>Problem solving – part whole</p> <p>Missing numbers</p> <p>Mental addition and subtraction</p> <p>Efficient subtraction</p> <p>Solving problems – all four operations</p>				<p>Problem solving – negative numbers</p> <p>Addition and subtraction (using estimations to check)</p> <p>All four operations</p> <p>Problem solving - fractions</p>



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Geometry: Properties of shape</b>	Awareness of 2D and 3D shapes	2D and 3D shapes	Recognising 2D and 3D shapes	Turns and angles	Identifying angles	Measuring angles in degrees	Measuring with a protractor
	Exploring everyday objects and shapes	Naming 3D shapes Naming 2D shapes	Drawing 2D shapes Counting sides and vertices of 2D shapes	Right angles in shapes Comparing angles	Comparing and ordering angles Identifying regular and irregular shapes	Measuring with a protractor Drawing lines and angles accurately	Drawing shapes accurately Angles in triangles
	Making simple patterns	Making patterns with shapes	Finding lines of symmetry	Drawing accurately Types of lines	Classifying triangles	Calculating angles on a straight line	Angles in polygons
	Exploring more complex patterns		Sorting 2D shapes Making patterns with 2D shapes	Recognising and describing 2D shapes Recognising and describing 3D shapes	Classifying and comparing quadrilaterals Deducing facts about shapes	Calculating angles around a point Calculating lengths and angles in a shape	Vertically opposite angles Equal distance
			Counting faces, edges and vertices of 3D shapes Sorting 3D shapes Making patterns with 3D shapes	Constructing 3D shapes	Line symmetry inside shapes Line symmetry outside shapes Completing a symmetric figure Completing asymmetric shapes	Recognising and drawing parallel lines Recognising and drawing perpendicular lines Reasoning with parallel and perpendicular lines Regular and irregular polygons Reasoning about 3D shapes	Parts of a circle Nets

## Mathematics Curriculum Overview



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Position and direction			Describing movement  Describing turns (quarter, half, three quarter, clockwise and anticlockwise)  Making patterns with shape		Describing a position  Drawing on a grid  Reasoning on a grid  Moving on a grid  Describing movement on a grid	Reflection  Reflection and coordinates  Translation  Translation and coordinates	Plotting coordinates in the first quadrant  Plotting coordinates  Plotting translations and reflections  Reasoning about shapes with coordinates

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Time	All about my day – using everyday language to discuss time	Time  Using before and after  Using a calendar  Telling the time to the hour  Telling the time to the half hour  Writing the time (hours, minutes, seconds)	Telling and writing the time to the nearest hour and half hour and quarters  Telling the time to 5 minute  Minutes in an hour  Finding durations of time  Comparing durations of time  Finding the start and end time	Months and years  Hours in a day  Estimating time  Telling the time to 5 mins  Finding durations  Comparing durations  Finding start and end times  Measuring time in seconds	Units of time  Converting time  Problem solving – units of time		

## Mathematics Curriculum Overview



		Comparing time (slower, faster, earlier, later)  Solving word problems – time	Hours in a day				
--	--	---	----------------	--	--	--	--

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Money			Money  Counting coins  Counting notes  Counting money – coins and notes  Showing equal amount of money  Comparing equal amounts of money  Calculating totals of money  Finding change  Money – two step word problems	Values of pounds and pence and totals  Converting pounds and pence  Adding money  Subtracting amounts Problem solving	Pounds and pence  Pounds, tenths and hundredths  Ordering amounts of money  Rounding money  Using rounding to estimate money  Problem solving - pence and pound  Problem solving – multiplication and division  Solving two step problems Problem solving money		

## Mathematics Curriculum Overview



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Perimeter and area					Kilometres  Perimeter of a rectangle  Perimeter of a rectilinear shape  Area – counting squares  Area – making shapes Comparing area	Measuring perimeter  Calculating perimeter  Calculating area  Comparing area  Estimating area	Shapes with the same area  Area and perimeter  Area of a parallelogram  Area of a triangle  Problem solving -- area  Problem solving - perimeter  Volume of a cuboid

## Mathematics Curriculum Overview



Measurement: Height and length	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Introducing height and length  Comparing lengths and heights  Using non-standard units  Length- using a ruler  Solving word problems - length	Measuring in centimetres and metres  Comparing lengths  Ordering lengths  Solving problems -length				

Measurement: Weight, volume and temperature	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Introducing weight and volume  Comparing weight  Measuring weight  Measuring to compare weight  Comparing capacity  Measuring capacity  Measuring to compare capacity	Compare mass in g and kg  Comparing volume ml and l  Reading and measuring temperature using a thermometer	Measuring capacity  Comparing capacity  Adding and subtracting - capacity  Problem solving - capacity		Volume  Comparing volume  Estimating volume	



		Solving word problems – weight and capacity					
--	--	---	--	--	--	--	--

Measurement: Mass and capacity	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					Measuring mass Comparing masses Adding and subtracting masses Problem solving – Mass		Volume Comparing volume Estimating volume

Measurement: Converting units	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							Using metric units (kg/g – km / m / cm / mm ) Imperial units of lengths – Feet / yards inches Imperial units of mass – lb / oz Imperial units of capacity – gallon / pints Converting units of time



# Mathematics Curriculum Overview



						Timetables Problem solving – measure	
--	--	--	--	--	--	--	--

Measurement: Imperial and metric	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							Metric measures (length, mass, volume and time / decimals)  Converting metric measures  Problem solving - metric measures  Miles and km  Imperial measures (length, mass, volume and time)

## Mathematics Curriculum Overview



	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statistics			Making tally charts Creating pictograms Interpreting pictograms Block diagrams Solving problems – statistics	Pictograms Bar charts Tables	Charts and tables Line graphs Problem solving – graphs	Interpreting tables Two-way tables Interpreting line graphs Drawing line graphs	Finding the mean Introduction to pie charts Reading and interpreting pie charts Fractions and pie charts Percentages and pie charts Interpreting line graphs Constructing line graphs

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra							Finding a rule Using a rule Formulae Solving equations

# Mathematics Curriculum Overview



							<p>Expressing missing number problems algebraically</p> <p>Equations with two unknowns</p> <p>Enumerate possibilities of combinations of two variables</p>
--	--	--	--	--	--	--	--

Ratio and proportion	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							<p>Ratio</p> <p>Scale drawings</p> <p>Scale factors</p> <p>Similar shapes</p> <p>Problem solving - ratio and proportion</p>