



Barrowby CE Primary School

Maths Curriculum

The Maths Curriculum for Year 4

Autumn Term 1						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Unit	Place Value, Rounding, Estimation and Magnitude	Securing Addition and Subtraction Mental Fluency	Securing Formal Written Addition and Subtraction Fluency	Count in Multiples of 6, 7, 9, 25 and 1000	Multiplication and Division Facts (Times Tables)	Factor Pairs, Integer Scaling and Correspondence Problems
	By the end of this unit children will be able to: <ul style="list-style-type: none"> Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones) Identify, represent and estimate numbers using different representations Round any number to the nearest 10, 100 or 1000 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Count in multiples of 6, 7, 9, 25 and 1000 Recall multiplication and division facts for multiplication tables up to 12×12 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Count in multiples of 6, 7, 9 Recall multiplication and division facts for multiplication tables up to 12×12 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Recognise and use factor pairs Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit numbers.
Suggested support for children with additional needs	<ul style="list-style-type: none"> Place value counters and place value sliders to represent 4-digit numbers. Modelling using the part-whole model Rounding mountains as a visual representation 	<ul style="list-style-type: none"> Counters to model regrouping Scaffolded layout of column addition and subtraction method in books 	<ul style="list-style-type: none"> Scaffolded layout of column addition and subtraction method in books Use place value counters to model regrouping and exchanging for 10 etc 	<ul style="list-style-type: none"> Multiplication grids available / visual times tables in the classroom Use of online tools such as Times Table Rockstars to focus on specific gaps in times tables for home learning Making links between patterns of known times tables e.g. 2s and 5s 	<ul style="list-style-type: none"> Concrete apparatus for making arrays then moving to pictorial representations in book Use of songs and chants to aid retention of times tables 	<ul style="list-style-type: none"> Multiplication grids available for children to recognise factor pairs
Step	LS1 & 2	LS3	LS4	LS5	LS6	LS7
1	Understand that 10 hundred are equal to 1 thousand, 10 tens are equal to 1 hundred and 10 ones are equal to 1 ten	Mental strategy comparison – consider appropriateness and efficiency.	Formal addition method with no regrouping (thousands, hundreds, tens and ones)	Understand that counting up in multiples is also repeated addition	Create and regroup arrays for multiplication (distributive law)	Understanding and finding factors

2	Find 1000 more or less than a given number	Develop estimation to support calculation	Formal addition method with regrouping in hundreds, tens and ones	Extend counting in multiples knowledge to 25s	Learn multiplication facts through building arrays (developing recall)	Solving integer scaling and correspondence problems
3	Compare and order 4-digit numbers	Extend regrouping 'Think 100' and 'Think 1000' to adding 3- and 4-digit numbers	Formal addition method with regrouping in hundreds, tens and ones causing a further thousand		Rehearsing and recalling multiplication facts; making links and spotting patterns	Exploring correspondence problems
4	Regroup 4-digit numbers	Introduce equal sum as a mental strategy	Find missing numbers in formal written addition		Rehearse division facts	Solving a range of correspondence problems
5	Estimate number magnitude	Regroup the minuend (the number being reduced) for subtraction	Revisit formal written subtraction (decomposition)		Laws of divisibility to help with division facts	Creating their own correspondence problems
6	Identify and estimate numbers using different representations	Introduce equal difference for mental subtraction	Formal written subtraction with regrouping of thousands (decomposition)		Strategies for calculating multiplication facts	
7	Round numbers to the nearest ten, hundred and thousand	Mixed addition and subtraction practice	Missing number and written subtraction problems			
8	Compare and round numbers to the nearest ten, hundred and thousand		Mixed practice			

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Autumn Term 2						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Unit	Problem Solving Including Measures to Apply Place Value, Mental Strategies and Arithmetic Laws	Multiply and Divide a One or Two-Digit Number by 10 and 100	Measure– Conversion of Units	Measure– Compare, Estimate and Calculate	Discrete and Continuous Data (Time Graphs), Including Application of Scales and Division	Perimeter
	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • 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 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • 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 ones, tenths and hundredths 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Convert between different units of measure [for example, kilometre to metre; hour to minute] 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Estimate, compare and calculate different measures • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
Suggested support for children with additional needs	<ul style="list-style-type: none"> • Pictorial representation of the bar model • Multi-sensory approach including concrete apparatus such as cubes 	<ul style="list-style-type: none"> • Use of place value sliders • Pre-teaching the concept of divide and multiply by ten linking to times tables 	<ul style="list-style-type: none"> • Concrete apparatus to make learning relevant e.g. capacity beakers and measuring equipment such as tape reassures and rulers. 	<ul style="list-style-type: none"> • Use clocks to support visual understanding of time conversions • Support when measuring capacity with equipment • Discuss estimations to develop an understanding of logical approximates 	<ul style="list-style-type: none"> • Provide a pre-drawn graph for data to be populated on • Explore the different forms of mathematical representation and discuss how data collected in a table can be transferred to a bar chart / line graph to display the information differently. Open ended questioning about the collected data. 	<ul style="list-style-type: none"> • Explore repeated addition as a method for calculating perimeter • Concrete apparatus such as cubes / lollipop sticks to support • Concept cartoons for worded problems

Step	LS8	LS9	LS10	LS11	LS12	LS13
1	Addition and subtraction problems involving measures	Multiplying and dividing by 10 – investigating the effect	Converting between units of length – understanding the calculations needed	Measuring, estimating and comparing length	Interpreting discrete data – reading scales on pictograms and bar charts	Revisiting existing knowledge about perimeter
2	Exploring multiplication	Multiplying and dividing by 10 – understanding the effect	Converting between units of mass and capacity – understanding the calculations needed	Measuring, comparing and estimating with mass and capacity	Interpreting continuous data	Calculating perimeter of rectangle shapes with missing sides
3	Linking multiplication and division on the bar model	Dividing by 10 – using decimal and fraction notation	Converting hours to minutes	Calculating with length, mass and capacity	Presenting data – choosing the best way to present it	Solving problems involving perimeter of rectilinear shapes with missing information
4	Exploring division	Multiplying and dividing by 100 – understanding the effect, using decimal notation	Converting minutes to hours and hours to minutes	Calculating time addition (hours and minutes)		Solving correspondence problems involving perimeter of rectilinear shapes
5	Rearranging multiplication and division models and word problems	Multiplying and dividing by 10 and 100 – applying learning and reasoning ideas	Converting between units of time – understanding the calculations needed	Calculating time subtraction (hours and minutes)		
6	Two step problems involving all four operations			Calculating duration of time (hours and minutes)		

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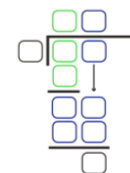
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Spring Term 1							
	Week 1		Week 2	Week 3	Week 4		Week 5
Unit	Properties of Shape and Symmetry		Decimal Numbers	Calculating with Decimals	Measure—Money and Problem-Solving involving Decimals to Two Decimal Places		Add and Subtract Fractions with the Same Denominator
	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • Identify lines of symmetry in 2-D shapes presented in different orientations 		By the end of this unit children will be able to: <ul style="list-style-type: none"> • Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten • Round decimals with one decimal place to the nearest whole number • Compare numbers with the same number of decimal places up to two decimal places • Recognise and write decimal equivalents to $1/4$; $1/2$; $3/4$ 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • Estimate and use inverse operations to check answers to a calculation 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Estimate, compare and calculate different measures, including money in pounds and pence • Solve simple measure and money problems involving fractions and decimals to two decimal places 		By the end of this unit children will be able to: <ul style="list-style-type: none"> • Add and subtract fractions with the same denominator
Suggested support for children with additional needs	<ul style="list-style-type: none"> • Access to 2D and 3D shapes of different sizes. Larger ones will support children with poor motor skills • Use mirrors to support identifying symmetry. • Modelling of symmetrical shapes 		<ul style="list-style-type: none"> • Use of place value sliders • Use of place value counters including decimal numbers • Use of foam fraction resources to make links to fractions and decimal equivalences • Rounding mountain as a visual representation 	<ul style="list-style-type: none"> • Counters to model regrouping • Scaffolded layout of column addition and subtraction method in books • Pictorial method of the part whole model to support. 	<ul style="list-style-type: none"> • Use money to support understanding of quantities • Scaffolded layout of column addition and subtraction method in books, link back to previous examples in other sequences. 		<ul style="list-style-type: none"> • Use cubes to support bar model understanding and adding fractions to make 1.
Step	LS14	LS15	LS16	LS17	LS18	LS19	LS20
1	Revisiting properties of lines	Recognising reflective symmetry in simple shapes	Place value with decimal numbers	Finding complements to 1	Calculating with money – mental and written addition	Non-routine problem solving using decimals – using a simpler case to solve a complex problem	Identify equal parts and whole and find complements of 1
2	Properties of shape – vocabulary focus	Recognising lines of symmetry in regular and irregular polygons	Regrouping decimal numbers	Regrouping for addition	Calculating with money – mental and written subtraction	Non-routine problem solving using decimals – finding all possibilities	Add and subtract fractions with no regrouping

3	Classifying quadrilaterals	Constructing symmetrical shapes	Order and compare place value of numbers with up to 2 decimal places	Regrouping for subtraction		Routine problem solving	Add fractions with regrouping
4	Drawing quadrilaterals	Constructing quadrilaterals with a specific number of lines of symmetry	Estimate decimal numbers	Formal written addition			Subtract fractions with regrouping
5			Decimal equivalences to tenths, hundredths, $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$	Formal written subtraction			
6			Round decimal numbers to nearest whole numbers	Comparing strategies			
7			x and \div by 10 and 100				

The Maths Curriculum for Year 4

Spring Term 2					
Unit	Week 1	Week 2	Week 3	Week 4	Week 5
	Finding Fractions of Quantities and Fractions in the Context of Measure	Equivalent Fractions, Ordering and Comparing	Multiply Two and Three-digit Numbers by a One-digit number Using a Formal Written Layout	Divide Two and Three-digit Numbers by a One-digit number Using a Formal Written Layout	
	By the end of this unit children will be able to: <ul style="list-style-type: none"> 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 Solve simple measure and money problems involving fractions and decimals to two decimal places 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Recognise and show, using diagrams, families of common equivalent fractions 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Multiply two-digit and three-digit numbers by a one-digit number using formal written layout 	By the end of this unit children will be able to: <ul style="list-style-type: none"> 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 	

Suggested SEND Support	<ul style="list-style-type: none"> Pictorial representations of fractions Use cubes and link them to the bar model representation 		<ul style="list-style-type: none"> Model diagrams to represent equivalent fractions Provide diagrams to aid understanding Use of foam fraction resources to make links to fractions and decimal equivalences 		<ul style="list-style-type: none"> Scaffold layout of formal written method in books Use of part whole model to break down calculations through partitioning Use of apparatus such as dines to support partitioning 2 and 3-digit numbers 		<ul style="list-style-type: none"> Scaffold layout of formal written method in books Place value counters to model sharing given numbers equally into different sized groups Provide a template to structure calculations e.g. 	
	Step	LS21	LS22	LS23	LS24	LS25		
1	Scaling unit fractions to find fractions of quantities	Recognising familiar fractions expressed as measures:	Compare and order a range of fractions	Multiplying multiples of ten by one-digit numbers	Long division with no regrouping			
2	Exploring the models for finding fractions of quantities	Ordering measures involving fractions	Showing equivalence with accurate diagrams	Multiplying multiples of one hundred by one-digit numbers	Long division with regrouping hundreds into tens			
3	Using the whole and number of equal parts to find fractions of quantities	Mixed worded problems involving a range of measures	Exploring families of common equivalent fractions	Multiplying two and three-digit numbers by one-digit numbers using distributive law (with regrouping)	Long division with regrouping hundreds into tens and tens into ones			
4	Use fractional reasoning to solve whole unknown problems		Create equivalent fractions by multiplying and dividing	Short multiplication with no regrouping	Short division			
5	Relating fractions to comparison problems			Short multiplication with regrouping in one column	Mixed division rehearsal			
6				Short multiplication with regrouping in one or more columns				



The Maths Curriculum for Year 4

Summer Term 1									
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6			
Unit	Time– Read, Write and Calculate and Convert Time on Analogue and Digital 12– and 24– Hour Clocks	Statistics– Interpret and Present Continuous and Discrete Data, Solve Problems Incorporating Measures	Roman Numerals 100 and Zero and Negative Numbers– Counting through Zero and Calculating in Context	Geometry– Angles and Properties of Triangles	Geometry—Position and Direction, Incorporating Angles and Plotting Points of a Shape	Multiplication and Division Review (Continues Summer Term 2 Week 1)			
	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Read, write and convert time between analogue and digital 12- and 24-hour clocks • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • 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 • Count backwards through zero to include negative numbers 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Identify acute and obtuse angles and compare and order angles up to two right angles by size • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Describe positions on a 2-D grid as coordinates in the first quadrant • 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 	By the end of this unit children will be able to: <ul style="list-style-type: none"> • Recall multiplication and division facts for multiplication tables up to 12 x 12 • 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 • Multiply two-digit and three-digit numbers by a one-digit number using formal written layout 			
Suggested SEND Support	<ul style="list-style-type: none"> • Use clocks to support visual understanding of time duration • Make links to known durations such as times within the school day e.g. break, lessons, lunch • Use of stopwatches to provide context to the length of a minute / 60 seconds. 	<ul style="list-style-type: none"> • Provide a pre-drawn graph for data to be populated on • Explore the different forms of mathematical representation and discuss how data collected in a table can be transferred to a bar chart / line graph to display the information differently. Open ended questioning about the collected data. 	<ul style="list-style-type: none"> • Use of a number line for counting on and back. Encourage use of ruler as mathematical equipment and accessible timeline in lessons to support independence. • Scaffold with visual prompts of Roman Numerals to refer to, daily links to roman numeral dates written in books. 	<ul style="list-style-type: none"> • Support with drawing lines and angles to support fine motor skills. • Ensure children have access to a variety of shape apparatus 	<ul style="list-style-type: none"> • Provide children with cut outs of the shapes to aid accurate translation • Provide template of grids for plotting coordinates 	<ul style="list-style-type: none"> • Multiplication grids available • Place value sliders • Scaffold layout of formal written method in books 			
Step	LS26	LS27	LS28	LS29	LS30	LS31	LS32	LS33	LS34

The Maths Curriculum for Year 4

Summer Term 2						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Unit	Multiplication and Division Review	Area	Fraction Review	Application of problems and Problem Solving—Developing Operation Sense		
	By the end of this unit children will be able to: <ul style="list-style-type: none"> Recall multiplication and division facts for multiplication tables up to 12×12 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 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Find the area of rectilinear shapes by counting squares 	By the end of this unit children will be able to: <ul style="list-style-type: none"> 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 	By the end of this unit children will be able to: <ul style="list-style-type: none"> Count in multiples of 6, 7, 9, 25 and 1000 Count backwards through zero to include negative numbers Solve number and practical problems that involve all of the above and with increasingly large positive numbers 		
Suggested SEND Support	<ul style="list-style-type: none"> Multiplication grids available Place value sliders Scaffold layout of formal written method in books 	<ul style="list-style-type: none"> Multiplication grids available Cubes for a concrete representation for finding area of shapes Concrete apparatus for making arrays, modelled with adult support 	<ul style="list-style-type: none"> Use of foam fraction resources to make links to fractions and decimal equivalences 	<ul style="list-style-type: none"> Ensure worded problems are supportive of children's reading ability and mathematical vocabulary is explained Access to concrete resources to aid understanding as modelled in previous learning sequences Number lines to support number sequences / encouraged use of ruler Discussions about various calculation methods 		
Step	LS34	LS35	LS36	LS37		
1	Times tables review	Find area of rectilinear shapes by counting squares	Adding and subtracting fractions beyond 1	Number sequences		
2	Multiplying and dividing by 10 / 100 and 100	Relate finding area of rectilinear shapes to arrays up to 12×12	Fractions of quantities with varied unknown values	Number patterns and relationships		
3	Related times tables facts	Problem solving with area	Deconstructing fraction problems involving measures	Working systematically and finding all possibilities		

4	Short multiplication review	Area and perimeter		Solving logic problems
5	Long division review			
6	Short division			