



St James' Church of England Primary School
Key Learning in Maths – Year 4



Haslingden St. James' C. E. Primary School
Curriculum Map 2023-2024 with Key Objectives
Year 4



Autumn Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	PLACE VALUE <ul style="list-style-type: none"> Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations. 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. Count backwards through zero to include negative numbers. 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. 				ADDITION & SUBTRACTION <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. 	
Autumn 2	ADDITION & SUBTRACTION <ul style="list-style-type: none"> Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why. 	MEASUREMENT <ul style="list-style-type: none"> Find the area of rectilinear shapes by counting squares. 	MULTIPLICATION AND DIVISION <ul style="list-style-type: none"> Recall and use multiplication and division facts for multiplication tables up to 12×12. Count in multiples of 6, 7, 9, 25 and 1000 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. 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. 			CONSOLIDATION



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Spring Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Spring 1	<p>MULTIPLICATION AND DIVISION</p> <ul style="list-style-type: none"> Identify factor pairs Multiply and divide numbers by 10, 100 and 100 Identify related multiplication and division facts Use informal and formal methods to multiply 2 and 3-digit numbers by a 1-digit number Use informal and formal methods to divide 2 and 3-digit numbers by a 1-digit number Identify the most efficient methods to solve problems 			<p>LENGTH AND PERIMETER</p> <ul style="list-style-type: none"> Measure and convert between metres and kilometres. Find the perimeter of rectangles, other composite shapes and other polygons. 		<p>FRACTION</p> <ul style="list-style-type: none"> Understand the whole Partition mixed numbers and identify them on number lines. Compare and order mixed numbers.
Spring 2	<p>FRACTIONS</p> <ul style="list-style-type: none"> Understand and use improper fractions Convert between improper fractions and mixed numbers. Find equivalent fractions Add and subtract fractions (including mixed numbers) 			<p>DECIMALS</p> <ul style="list-style-type: none"> Understand the equivalence between tenths as a fraction and a decimal. Place tenths on a place value grid and on a number line. Understand the equivalence between hundredths as a fraction and a decimal. Place hundredths on a place value grid and on a number line. Divide 1 and 2 digit numbers by 10 and 100. 		

Summer Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Summer 1	DECIMALS <ul style="list-style-type: none"> • Make a whole with tenths and hundredths • Partition decimals • Compare and order decimals • Round to the nearest whole number • Find the equivalence of halves and quarters 		MONEY <ul style="list-style-type: none"> • Write money using decimal points • Convert between pounds and pence • Compare and estimate amounts of money • Calculate different amounts of money 		TIME <ul style="list-style-type: none"> • Solve problems involving years, months, weeks, days, hours, minutes and seconds • Convert between analogue and digital clock • Convert to and from the 24 hour clock. 	
Summer 2	SHAPE <ul style="list-style-type: none"> • Understand angles as turn • Identify angles of different sizes • Compare and order angles • Use mathematical vocabulary to describe different triangles and quadrilaterals • Identify polygons and lines of symmetry 		STATISTICS <ul style="list-style-type: none"> • Interpret and draw different graphs including line graphs 	POSITION AND DIRECTION <ul style="list-style-type: none"> • Describe and plot position using coordinates • Draw 2D shapes on a grid • Translate and describe translation across a grid 		ASSESSMENT AND CONSOLIDATION

Number – number and place value

- Count in multiples of 6, 7, 9, 25 and 1000.
- Count backwards through zero to include negative numbers.
- Count up and down in hundredths.
- *Read and write numbers to at least 10 000.*
- *Read and write numbers with up to two decimal places.*
- Recognise the place value of each digit in a four-digit number.
- *Identify the value of each digit to two decimal places.*
- *Partition numbers in different ways (e.g. $2.3 = 2+0.3$ & $1+1.3$).*
- Identify, represent and estimate numbers using different representations (*including the number line*).
- Order and compare numbers beyond 1000.
- *Order and compare numbers with the same number of decimal places up to two decimal places.*
- Find *0.1, 1, 10, 100* or 1000 more or less than a given number.
- Round any number to the nearest 10, 100 or 1000.
- Round decimals (one decimal place) to the nearest whole number.
- Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer.
- *Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps.*
- Read Roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value.
- Solve number and practical problems that involve all of the above and with increasingly large positive numbers.

Number – addition and subtraction

- *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).*
- *Select a mental strategy appropriate for the numbers involved in the calculation.*
- *Recall and use addition and subtraction facts for 100.*
- *Recall and use +/- facts for multiples of 100 totalling 1000.*
- *Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).*
- *Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place.*
- Add and subtract numbers with up to 4 digits *and decimals with one decimal place* using the formal written methods of columnar addition and subtraction where appropriate.
- Estimate; use inverse operations to check answers to a calculation.
- Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
- *Solve addition and subtraction problems involving missing numbers.*

Number – multiplication and division

- *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).*
- Recognise and use factor pairs and commutativity in mental calculations.
- Recall multiplication and division facts for multiplication tables up to 12×12 .
- *Use partitioning to double or halve any number, including decimals to one decimal place.*
- 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.
- *Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.*
- *Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.*
- Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, *division (including interpreting remainders)*, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Number – fractions

- Understand that a fraction is one whole number divided by another (e.g. $\frac{3}{4}$ can be interpreted as $3 \div 4$).
- Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators.
- Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- Count on and back in steps of unit fractions.
- Compare and order unit fractions and fractions with the same denominators (including on a number line).
- Recognise and show, using diagrams, families of common equivalent fractions.
- Recognise and write decimal equivalents of any number of tenths or hundredths.
- Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.
- Add and subtract fractions with the same denominator (using diagrams).
- 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.

Geometry – properties of shapes

- 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.
 - Complete a simple symmetric figure with respect to a specific line of symmetry.
 - Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- Identify acute and obtuse angles and compare and order angles up to two right angles by size.

Geometry – position and direction

- Describe positions on a 2-D grid as coordinates in the first quadrant.
 - Plot specified points and draw sides to complete a given polygon.
- Describe movements between positions as translations of a given unit to the left/right and up/down.

Measurement

- Estimate, compare and calculate different measures, including money in pounds and pence.
- Order temperatures including those below 0°C .
- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.
- Know area is a measure of surface within a given boundary.
- Find the area of rectilinear shapes by counting squares.
- Convert between different units of measure [e.g. kilometre to metre; hour to minute].
- Read, write and convert time between analogue and digital 12- and 24-hour clocks.
- Write amounts of money using decimal notation.
- Recognise that one hundred 1p coins equal £1 and that each coin is $\frac{1}{100}$ of £1.
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures.

Statistics

- Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties and sizes.
 - Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, time graphs.
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.