Futures Are Limitless

Falmouth Primary Academy

Intent

At Falmouth Primary Academy, our mathematics curriculum is designed to ensure that every child develops a deep, secure, and adaptable understanding of mathematical concepts. Rooted in the belief that *Futures Are Limitless*, we empower pupils to become confident, resilient mathematicians who can apply their knowledge with fluency and reasoning in a range of contexts.

We follow a small-steps approach to learning, breaking down concepts into manageable, sequential steps that build on prior knowledge. This ensures that all pupils, regardless of starting point, can access and master the curriculum. Regular assessment checkpoints are embedded throughout to identify gaps, inform teaching, and provide timely support or challenge.

Our curriculum promotes mathematical thinking, problem-solving, and a growth mindset. We aim to instil a belief in every child that they *can* succeed in maths and that their potential is not fixed.

Futures Are Limitless

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Implementation: Year 3

Autumn Term		
Block 1: Place Value (to 1,000)		
Declarative	Procedural	Conditional
• Identify numbers using different representations. ACP: What numbers are represented by these pictures? • Read and write numbers up to 1,000 in numerals and in words. ACP: Match numbers written in words to numbers written in numerals. • Recognise the place value of each digit in a three-digit number. ACP: Quick-fire quiz – what is the value of the red digit in each number? • Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. ACP: Complete partially filled number tracks.	• Represent and estimate numbers using different representations. • ACP: Use concrete apparatus and pictures to represent given numbers. • Order and compare numbers up to 1,000. ACP: Use <, > and = to compare numbers/Order a set of numbers with. • Compose and decompose 3-digit numbers using standard and non-standard partitioning. ACP: How many ways can you partition a given number?	• Reason about the location of any 3-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. ACP: What numbers are the arrows pointing to? Place given numbers on partially completed number lines. • Solve number problems and practical problems involving the declarative and procedural knowledge. ACP: Low stakes test.
Block 2: Addition and Subtraction		
Declarative	Procedural	Conditional
• Calculate complements to 100. ACP: Quick-fire quiz on whiteboards.	• Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds. ACP: Quiz-fire quiz on whiteboards. • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. ACP: Low stakes test.	• Apply their increasing knowledge of mental and written methods. ACP: Which method would you use and why? • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number questions. ACP: Solve missing number questions using the inverse. • Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. • ACP: Low stakes test.
Block 3: Multiplication and Division A		
Declarative	Procedural	Conditional
• Recall and use multiplication facts for the 3, 4 and 8 multiplication tables. ACP: Ongoing during Rapid Recall.	• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental methods. ACP: Low stakes test.	• Solve problems, including missing number problems, involving multiplication and division. ACP: Low stakes test.

Spring Term		
Block 1: Multiplication and Division B		
Declarative	Procedural	Conditional
• Develop efficient mental methods using commutativity and associativity and multiplication and division facts to derive related facts. ACP: Use known facts to answer questions. For example: use 3 x 2 = 6 to solve 30 x 2.	• Develop reliable written methods for multiplication and division, starting with calculations of 2-digit numbers by 1-digit numbers and progressing to the formal written methods of short multiplication and division. ACP: Low stakes test.	• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems. ACP: Low stakes test.
Block 2: Length and Perimeter		
Declarative	Procedural	Conditional
	• Measure, compare, add and subtract lengths (mm, cm and m). ACP: Practical activity – measuring. Low stakes test - comparing, adding and subtracting lengths. • Measure the perimeter of simple 2-D shapes. ACP: Calculate the perimeter of shapes, including finding missing sides.	• Solve problems involving adding and subtracting lengths. ACP: Low stakes test.
Block 3: Fractions A		
Declarative	Procedural	Conditional
• 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. ACP: What fraction of each diagram is shaded? Shade in diagrams to show given number of tenths. • Recognise and show, using diagrams, equivalent fractions with small denominators. ACP: Use bar models and number lines to find equivalent fractions.	• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. ACP: Which diagrams show ¼ shaded? What fraction of each picture has been shaded? • Compare and order unit fractions, and fractions with the same denominators. ACP: Use < and > to compare pairs of fractions. Order a set of fractions from smallest to largest.	• Reason about the location of any fraction within 1 in the linear number system. ACP: Where would given fractions be placed on a partially completed number line?
Block 4: Mass and Capacity		
Declarative	Procedural	Conditional
	• Measure, compare, add and subtract mass (kg and g) and volume/capacity (l and ml). ACP: Practical activity – measuring. Low stakes test – comparing, adding and subtracting measurements.	• Solve problems involving adding and subtracting mass and volume/capacity. • ACP: Low stakes test.

Summer Term		
Block 1: Fractions B		
Declarative	Procedural	Conditional
• Recognise fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. ACP: Use pictorial representations to answer questions such 'What fraction of the shapes are circles?'	• Find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. ACP: Find given fractions of a set of objects. • Add and subtract fractions with the same denominator within one whole. ACP: Low stakes test.	• Solve problems that involve Year 3 declarative and procedural fractions knowledge. ACP: Low stakes test.
Block 2: Money		
Declarative	Procedural	Conditional
	• Add and subtract amounts of money to give change, using both £ an p in practical contexts. ACP: Use number lines to add and subtract amounts and to find change.	• Solve problems that involve adding and subtracting amounts of money. ACP: Low stakes test.
Block 3: Time		
Declarative	Procedural	Conditional
• Tell and write the time from an analogue clock, including Roman numerals from I to XII, and 12-hour and 24-hour clocks. ACP: Record given times on analogue and digital clocks. • Estimate and read time with increasing accuracy to the nearest minute. ACP: Read the time on clock faces and record it in numerals and words. • Use vocabulary such as o'clock, am, pm, morning, afternoon, noon and midnight. ACP: Order a series of events (use mixture of vocabulary) from earliest to latest. • Know the number of seconds in a minute and the number of days in each month, year and leap year. ACP: Quick-fire quiz on whiteboards.	• Record and compare time in terms of minutes, seconds and hours. ACP: Practical activity – record times taken to complete an activity. Order the times from quickest to slowest. • Compare the duration of events. ACP: How long did given tasks/events take to complete?	• Solve problems with time. ACP: Low stakes test.
Block 4: Properties of Shape		
Declarative	Procedural	Conditional
• Describe the properties of 2-D shapes. ACP: Describe the properties of 2-D shapes using accurate language. • Recognise 3-D shapes in different orientations and describe them. ACP: Describe properties of a 3-D shape using accurate language.	• Draw 2-D shapes. ACP: Draw given polygons. • Make 3-D shapes using modelling materials. ACP: Practical activity – use Polydron or other modelling materials to make 3-D shapes. • Identify whether angles are greater than or less than a right angle. ACP: Quick-fire quiz.	

• Recognise angles as a property of shape or a description of turn. • Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a whole turn. ACP: Describe how pictures have been rotated in relation to turn and clockwise or anti-clockwise. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. ACP: Draw lines parallel or perpendicular to given lines.		
Block 4: Statistics		
Declarative	Procedural	Conditional
• Understand and use simple scales (2, 5 or 10 units per cm) in pictograms and bar charts. ACP: Complete missing numbers on scales.	• Interpret and present data using bar charts, pictograms and tables. ACP: Collect data as a class. Children present this in a pictogram and a bar chart.	• Solve one-step and two-step questions eg 'How many more?' and 'How many fewer?', using information presented in scaled bar charts and pictograms and tables. ACP: Low stakes test.

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Implementation: Year 4

Autumn Term		
Block 1: Place Value (up to 10,000)		
Declarative	Procedural	Conditional
• Identify and represent numbers to 10,000 using different representations. ACP: What numbers are represented? • Recognise the place value of each digit in a four-digit number. ACP: What is the value of the red digit in each number? • Count in multiples of 6, 7, 9, 25 and 1,000. ACP: Oral activities. • Count backwards through zero to include negative numbers. ACP: Fill in missing numbers on a number line. • Find 1,000 more or less than a given number. ACP: Quick-fire quiz on whiteboards. • 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. ACP: Quick-fire quiz – what are the numbers written in Roman numerals?	• Order and compare numbers beyond 1,000. ACP: Use < and > to compare pairs of numbers. Order a set of numbers from smallest to largest. • Estimate numbers using different representations. ACP: Estimate where numbers would go on a number line. • Compose and decompose 4-digit numbers using standard and non-standard partitioning. ACP: Find as many different ways as you can to partition a given number. • Round any number to the nearest 10, 100 or 1,000. ACP: Low stakes test.	• Solve number and practical problems that involve increasingly large positive numbers. ACP: Low stakes test. • Reason about the location of any 4-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100 and rounding to the nearest of each. ACP: What numbers are the arrows pointing to? Place given numbers on partially completed number lines.
Block 2: Addition and Subtraction		
Declarative	Procedural	Conditional
	• Add and subtract numbers using mental methods. ACP: Quick-fire questions on whiteboards. • Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. ACP: Low stakes test.	• Solve addition and subtraction two-step problems in context; deciding which operations and methods to use and why. ACP: Low stakes test. • Estimate and use inverse operations to check answers to calculations. ACP: Use the inverse to check answers to completed calculations.
Block 3: Area		
Declarative	Procedural	Conditional
	• Find the area of rectilinear shapes by counting shapes. ACP: Low stakes test.	
Block 4: Multiplication and Division A		
Declarative	Procedural	Conditional

• Recall multiplication and division facts for multiplication tables up to 12 x 12, and recognise products in multiplication tables as multiples of the corresponding number. ACP: Ongoing during Rapid Recall and 99 Club.	• Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers. ACP: Low stakes test.	• Solve problems involving multiplication and division facts up to 12 x 12. ACP: Low stakes test.

Spring Term		
Block 1: Multiplication and Division B		
Declarative	Procedural	Conditional
• Recognise factor pairs. ACP: Quick-fire test on whiteboards. • Multiply and divide whole numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size. ACP: Use place value charts to multiply and divide whole numbers by 10 and 100.	• Use factor pairs and commutativity in mental calculations. ACP: Use factor pairs to multiply 2-digit numbers by 1-digit numbers. • Use number facts and rules of arithmetic to solve mental and written calculations. ACP: Use the distributive and associative laws to answer questions. • Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout. ACP: Low stakes test. • Divide 2-digit and 3-digit numbers by a 1-digit number using a formal written method (short division). ACP: Low stakes test.	• Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. ACP: Low stakes test. • Solve problems involving division, interpreting remainders appropriately according to the context. ACP: Low stakes test. • Estimate and use inverse operations to check answers to calculations. ACP: Use the inverse to check the answers to completed questions.
Block 2: Length and Perimeter		
Declarative	Procedural	Conditional
	• Convert between different units of length. ACP: Compare measurements which are in different units of length. • Measure and calculate the perimeter of rectilinear figures (including squares) in cm and m. ACP: Order the shapes starting with the one with the smallest perimeter. • Find the perimeter of regular and irregular polygons. ACP: Calculate the perimeter of polygons, including finding missing lengths.	
Block 3: Fractions		
Declarative	Procedural	Conditional
• Recognise families of common equivalent fractions. ACP: Quick-fire quiz – true or false questions based on a fraction wall.	• Show, using diagrams, families of common equivalent fractions. ACP: Draw bar models to find equivalent fraction families. • Convert mixed numbers to improper fractions and vice versa.	• Reason about the location of mixed numbers in the linear number system. ACP: Place mixed numbers and improper fractions on a number line. • Solve simple measure problems involving fractions. ACP: Low stakes test.

	ACP: Look at pictorial representations and write them as mixed numbers and improper fractions. • Add and subtract fractions with the same denominator, including bridging whole numbers. ACP: Low stakes test to include adding to and subtracting from mixed numbers. • Find fractions of a quantity. ACP: Find unit and non-unit fractions of quantities.	• Solve problems involving increasingly harder fractions to calculate quantities, including non-unit fractions where the answer is a whole number. ACP: Low stakes test
Block 4: Decimals A		
Declarative	Procedural	Conditional
• Recognise and write decimal equivalents to ¼, ½ and ¾ ACP: Quick-fire quiz on whiteboards. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. ACP: Partition hundredths into tenths and hundredths.	• Recognise and write decimal equivalents of any number of tenths or hundredths. • ACP: Draw lines to match pictorial representations with their decimal equivalents. • Find the effect of dividing a 1- or 2-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths. ACP: Quick-fire quiz including missing number questions.	• Reason about the position of fractions and decimals on a number line. ACP: Place given fractions and decimals on a number line from 0 to 2.

Summer Term		
Block 1: Decimals B		
Declarative	Procedural	Conditional
	• Compare numbers with the same number of decimal places up to two decimal places. ACP: Compare pairs of decimals, including those with different numbers of decimal places. • Round decimals with one decimal place to the nearest whole number. ACP: Quick-fire quiz on whiteboards.	• Solve simple measure and money problems involving decimals to two decimal places. ACP: Low stakes test.
Block 2: Money		
Declarative	Procedural	Conditional
	• Estimate, compare and calculate with money in pounds and pence. ACP: Low stakes test.	• Solve simple money problems involving decimals to two decimal places. ACP: Low stakes test.
Block 3: Time		
Declarative	Procedural	Conditional
• Read and write time in analogue and digital 12- and 24-hour clocks. ACP: What time is shown on the different clocks?	• Convert time between analogue and digital 12- and 24-hour clocks. ACP: Match the times on the analogue clocks to the digital clocks.	• Solve problems involving converting units of time. ACP: Low stakes test.

	• Convert from hours to minutes; minutes to seconds; years to months; weeks to days. ACP: Use <, > and = to complete the statements.	
Block 4: Properties of Shape		
Declarative	Procedural	Conditional
• Identify regular polygons, including equilateral triangles and squares, as those in which the side lengths are equal and the angles are equal. ACP: Match the labels to the polygons. • Identify acute and obtuse angles. ACP: Quick-fire quiz – are the angles acute, obtuse or right angles?	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. ACP: Match shapes to their definition. • Compare and order angles up to two right angles by size. ACP: Order the angles from smallest to greatest. • Identify lines of symmetry in 2-D shapes presented in different orientations. ACP: Draw all the lines of symmetry on 2-D shapes. • Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry. ACP: Reflect a shape on a grid using the line of symmetry.	
Block 5: Statistics		
Declarative	Procedural	Conditional
	• Interpret discrete and continuous data, including bar charts and time graphs. ACP: Answer simple questions about different types of graphs. • Present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ACP: Collect data as a class and draw a time graph using a given scale.	• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. ACP: Answer comparison, sum and difference questions about a variety of charts and graphs.
Block 6: Position and Direction		
Declarative	Procedural	Conditional
• Describe positions on a 2-D grid as co-ordinates in the first quadrant. ACP: Write down the co-ordinates of points in the first quadrant.	• Plot specified points and draw sides to complete a given polygon. ACP: Plot points to draw polygons. • Describe movements between positions as translations of a given unit to the left/right and up/down. ACP: Describe the translation of shape A to shape B. • Draw polygons specified by co-ordinates in the first quadrant and translate within the first quadrant. ACP: Follow instructions to translate a shape and write down its new co-ordinates.	

Futures Are Limitless

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Impact

The impact of our maths curriculum is evident in the confidence, competence, and curiosity our pupils demonstrate in their mathematical learning. Through small-step progression and responsive teaching, children develop secure foundations that enable them to tackle increasingly complex problems with independence and resilience.

Assessment checkpoints ensure that misconceptions are swiftly addressed and that learning is personalised to meet the needs of all learners. As a result, pupils make strong progress and are well-prepared for the next stage of their education.

Our pupils see themselves as mathematicians. They approach challenges with perseverance, articulate their reasoning clearly, and apply their skills across the curriculum and in real-life contexts. Most importantly, they leave Falmouth Primary Academy with the belief that their *futures are limitless*—and that mathematics is a key to unlocking those futures.