Key Learning Coverage – Year 5

This table shows where the Key Learning is explicitly taught.
Teachers should take every opportunity to combine the learning from different areas of the mathematics curriculum, for example, using a measurement context when calculating and also to revisit learning on a regular basis through Starter sessions.

Key Learning: Number and Place Value	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Wk 1				Wk 1	Wk 1
• *Count forwards and backwards in decimal steps*	Wk 2				Wk 1	
• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Wk 1	Ongoing			Wk 1	Wk 1
• Read, write, order and compare numbers with up to 3 decimal places	Wk 2	Ongoing			Wk 1	
• *Identify the value of each digit to three decimal places*	Wk 2				Wk 1	
• *Identify represent and estimate numbers using the number line*	Wks 1 and 2				Wk 1	
• *Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number*	Wks 1 and 2				Wk 1	
• Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	Wk 1	Ongoing when estimating calculations			Wk 1	Wk 1
• Round decimals with two decimal places to the nearest whole number and to one decimal place	Wk 2	Ongoing when estimating calculations			Wk 1	Wk 3
• Multiply/divide whole numbers and decimals by 10, 100 and 1000	Wk 2		Wk 4		Wk 6	
• Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero			Wk 1			Wk 1
• *Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal*	Wks 1 and 2		Wk 1		Wk 1	Wk 1
• Read Roman numerals to 1000 (M); recognise years written as such			Wk 1	Ongoing in Starters		
• Solve number and practical problems that involve all of the above	Wk 1				Wk 1	Wk 1
Key Learning: Number - Addition and Subtraction	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)*	Wks 3 and 6		Wk 2	Wk 5	Wk 5	
• *Select a mental strategy appropriate for the numbers involved in the calculation*	Wk 6		Wk 2	Wk 5	Wk 5	
• *Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)*	Ongoing when selecting appropriate methods of calculation					
• *Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)*	Ongoing when selecting appropriate methods of calculation					
• Add and subtract numbers mentally with increasingly large numbers *and decimals to two decimal places*	Wk 6		Wk 2	Wk 5	Wk 5	
• Add and subtract whole numbers with more than 4 digits *and decimals with two decimal places,* including using formal written methods (columnar addition and subtraction)	Wk 3		Wk 2	Wk 5	Wk 5	Wk 2
• *Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy*	Wk 3		Wk 2		Wk 5	Wk 2
• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Wk 3		Wk 2	Wk 5	Wk 5	

• *Solve addition and subtraction problems involving missing numbers*	Ongoing when solving problems					
Key Learning: Number - Multiplication and Division	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)*		Wks 1, 2 and 4	Wk 3	Wk 1	Wk 6	Wk 2
• *Select a mental strategy appropriate for the numbers involved in the calculation*		Wk 1	Wk 3	Wk 1	Wk 6	
• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers			Wk 3	Wk 1		
• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers		Wk 1	Ongoing in Starters			
• Establish whether a number up to 100 is prime and recall prime numbers up to 19		Wk 1	Ongoing in Starters			
• Recognise and use square (^{2}) and cube (^{3}) numbers, and notation		Wk 1			Wk 6	
• *Use partitioning to double or halve any number, including decimals to two decimal places*		Wk 1	Ongoing in Starters			
• Multiply and divide numbers mentally drawing upon known facts		Wk 1	Wk 3	Wk 1 ÷		
• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes		Wks 1 and 2	Wk 3			
• 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		Wk 4	Wk 3			Wk 2
• 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		Wk 2		Wk 1	Wk 6	Wk 2
• *Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy*	Ongoing when calculating					Wk 2
• Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign		Wk 2 ÷		Wk 1 ÷		Wk 2
• Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates		Wk 2 ÷	Wk 3	Wk 1 ÷	Wk 6	
Key Learning: Number - Fractions	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• Recognise mixed numbers and improper fractions and convert from one form to the other				Wk 3	Wk 2	
• Read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$)		Wk 3	Ongoing in Starters			
• *Count on and back in mixed number steps such as* $1\frac{1}{2}$		Wk 3	Ongoing in Starters			
• Compare and order fractions whose denominators are all multiples of the same number *(including on a number line)*		Wk 3			Wk 2	
• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths		Wk 3			Wk 2	
• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Wk 2	Ongoing application of knowledge when using decimals				
• Add and subtract fractions with denominators that are the same and that are multiples of the same number *(using diagrams)*				Wk 3	Wk 2	
• Write statements > 1 as a mixed number (e.g. $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$)				Wk 3		

• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams					Wk 2	
• 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						Wk 3
• *Solve problems involving fractions and decimals to three places*	Wk 2 - decimals	Wk 3 - fractions				Wk 3 - decimals
• Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and fractions with a denominator of a multiple of 10 or 25						Wk 3
Key Learning: Measurement	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• *Use, read and write standard units of length and mass*			Wk 4	Wk 5		
• Estimate *(and calculate)* volume ((e.g., using 1 cm^3 blocks to build cuboids (including cubes)) and capacity (e.g. using water)			Wk 4	Wks 4 and 5		Wk 5
• *Understand the difference between liquid volume and solid volume*				Wk 4		Wks 4 and 5
• *Continue to order temperatures including those below 0°C*			Wk 1			Wk 1
• *Calculate difference in temperature, including those that involve a positive and negative temperature*			Wks 1 and 2			
• Convert between different units of metric measure			Wk 4	Ongoing application when x ÷ by powers of 10		
• Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints					Wk 3	Wk 4
• Measure/calculate the perimeter of composite rectilinear shapes	Wk 5	Ongoing when learning about length				
• Calculate and compare the area of rectangle, use standard units square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes		Wk 4		Wk 4		Wk 5
• *Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks*		Wk 5			Wk 3	
• Solve problems involving converting between units of time		Wk 5			Wk 3	Wk 4
• Use all four operations to solve problems involving measure using decimal notation, including scaling			Wk 2 + -			Wk 4
Key Learning: Geometry - Properties of Shape	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Wk 5		Wk 5	Wk 2	Wk 4	
• Use the properties of rectangles to deduce related facts and find missing lengths and angles	Wk 5			Wk 2	Wk 4	
• Identify 3-D shapes from 2-D representations				Wk 2	Wk 4	
• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes				Wk 2	Wk 4	
• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Wk 4		Wk 6			
• Draw given angles, and measure them in degrees (°)	Wk 4		Wk 6			
• Identify:			Wk 6	Ongoing application when calculating		

- angles at a point and one whole turn (total 360°) - angles at a point on a straight line and half a turn (total 180°) - other multiples of 90°						
Key Learning: Geometry - Position and Direction	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• *Describe positions on the first quadrant of a coordinate grid*			Wk 5		Wk 4	
• *Plot specified points and complete shapes*			Wk 5		Wk 4	
• 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			Wk 5		Wk 4	
Key Learning: Statistics	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• *Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)*	Ongoing in Starters			Wk 2 shape		
• Complete, read and interpret information in tables and timetables		Wk 5			Wk 3	
• Solve comparison, sum and difference problems using information presented in *all types of graph including* a line graph	Wk 6				Wk 3	
• *Calculate and interpret the mode, median and range*	Ongoing when ordering numbers (median) and calculating (range)			Wk 5		