

Key Learning Coverage – Year 6

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 integers, decimals, powers of 10	Wk 1		Wk 1		Wk 1	Wk 4
• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	Wk 1	Ongoing				
• Identify the value of each digit to three decimal places	Wk 1	Ongoing particularly when ordering and calculating				
• Identify, represent and estimate numbers using the number line	Wks 1, 2 and 5			Wk 1	Wks 1 and 2	
• Order and compare numbers including integers, decimals and negative numbers	Wk 1		Wk 3		Wk 1	Wk 4
• Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number	Wk 1	Applied when calculating			Wk 1	Wk 4
• Round any whole number to a required degree of accuracy	Wk 1	Ongoing when estimating calculations				
• Round decimals with three decimal places to the nearest whole number or one or two decimal places	Wk 1	Ongoing when estimating calculations			Wk 1	Wk 4
• Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	Applied when converting between metric units of measure					
• Use negative numbers in context, and calculate intervals across zero	Wk 1		Wk 3			Wk 4
• Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal			Wk 1		Wk 5	Wk 4
• Solve number and practical problems that involve all of the above	Wk 1	Ongoing				
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)	Wk 2 + Wk 5 -			Wk 1	Wk 2	Wk 2
• Select a mental strategy appropriate for the numbers in the calculation	Wk 2 + Wk 5 -			Wk 1	Wk 2	Wk 2
• Recall and use addition and subtraction facts for 1 (with decimals to two decimal places)	Wk 1	Ongoing in Starters and also applied when calculating mentally				
• Perform mental calculations including with mixed operations and large numbers and decimals	Wk 2 + Wk 5 -	Ongoing in calculation units			Wk 1	Wk 2
• Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)	Wk 2 + Wk 5 -			Wk 1	Wk 2	Wk 2
• Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Wk 2 + Wk 5 -	Ongoing when calculating			Wk 2	
• Use knowledge of the order of operations to carry out calculations				Wk 1	Wk 2	Wk 2
• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Wk 2 + Wk 5 -			Wk 1	Wk 2	Wk 2
• Solve problems involving all four operations, including those with missing numbers	Wk 2 + Wk 5 -			Wk 1 + -	Wk 2	Wk 2

Key Learning: Number - Multiplication and Division	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) 	Wk 3 x Wk 6 ÷		Wk 5 ÷ Wk 6 x			Wk 2
<ul style="list-style-type: none"> Select a mental strategy appropriate for the numbers in the calculation 	Wk 3		Wk 6 x			Wk 2
<ul style="list-style-type: none"> Identify common factors, common multiples and prime numbers 		Wk 1	Wk 4			
<ul style="list-style-type: none"> Use partitioning to double or halve any number 	Ongoing in Starters and also applied when calculating mentally					
<ul style="list-style-type: none"> Perform mental calculations, including with mixed operations and large numbers 	Wk 3 x Wk 6 ÷		Wk 5 ÷ Wk 6 x		Wk 1	Wk 2
<ul style="list-style-type: none"> Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication 	Wk 3		Wk 6		Wk 2	Wk 2
<ul style="list-style-type: none"> Multiply one-digit numbers with up to two decimal places by whole numbers 	Wk 3		Wk 6	Ongoing when calculating		
<ul style="list-style-type: none"> Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context 	Wk 6		Wk 5		Wk 2	Wk 2
<ul style="list-style-type: none"> Use written division methods in cases where the answer has up to two decimal places 	Wk 6		Wk 5	Ongoing when calculating		
<ul style="list-style-type: none"> Use estimation <i>and inverse</i> to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy 	Wk 3 x Wk 6 ÷	Ongoing when calculating			Wk 2	Wk 2
<ul style="list-style-type: none"> Solve problems involving all four operations, <i>including those with missing numbers</i> 	Wk 3 x Wk 6 ÷		Wk 5 ÷ Wk 6 x	Ongoing		
Key Learning: Number – Fractions, Decimals and Percentages	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<ul style="list-style-type: none"> Compare and order fractions, including fractions > 1 (<i>including on a number line</i>) 		Wk 1			Wk 1	Wk 3
<ul style="list-style-type: none"> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination 			Wk 4		Wk 1	Wk 3
<ul style="list-style-type: none"> Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts 		Wks 1 and 2	Ongoing in Starters			
<ul style="list-style-type: none"> Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and $\frac{3}{8}$) 		Wk 1	Wk 4		Wk 1	
<ul style="list-style-type: none"> Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions 		Wk 1	Wk 4		Wk 1	Wk 3
<ul style="list-style-type: none"> Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) 			Wk 4		Wk 3	Wk 3
<ul style="list-style-type: none"> Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$) 			Wk 4		Wk 3	Wk 3
<ul style="list-style-type: none"> Find simple percentages of amounts 		Wk 2		Wk 2		
<ul style="list-style-type: none"> Solve problems involving fractions 		Wk 1	Ongoing			
<ul style="list-style-type: none"> Solve problems which require answers to be rounded to specified degrees of accuracy 		Wks 2, 3, 5 and 6	Wks 5 and 6	Ongoing		
<ul style="list-style-type: none"> Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison 		Wk 2		Wk 2	Wk 3	

Key Learning: Number - Ratio and Proportion						
• Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication/division facts		Wk 2		Wk 2	Wk 3	
• Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples		Wk 2		Wk 2	Wk 3	
• Solve problems involving similar shapes where the scale factor is known or can be found		Wk 2		Wk 2	Wk 3	
Key Learning: Number – Algebra						
• Use simple formulae			Wk 1		Wk 5	
• Generate and describe linear number sequences			Wk 1		Wk 5	
• Express missing number problems algebraically	Wks 2, 3 and 5	Ongoing when solving calculation word problems				
• Find pairs of numbers that satisfy an equation with two unknowns	Wks 2, 3 and 5	Ongoing when calculating				
• Enumerate possibilities of combinations of two variables			Wk 6	Ongoing when solving problems		
Key Learning: Measurement						
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
• Use, read and write standard units of length, mass, volume and time using decimal notation to three decimal places	Wk 3 time	Wk 4 length and mass Wk 5 area and volume		Wk 2	Wk 6 length and time	Wk 1 – mass, volume and capacity
• Convert between standard units of length, mass, volume and time using decimal notation to three decimal places	Wk 3 time	Wk 4 length and mass		Wk 2	Wk 6 length and time	Wk 1 – mass, volume and capacity
• Convert between miles and kilometres		Wk 4		Wk 5	Wk 5	
• Recognise that shapes with the same areas can have different perimeters and vice versa		Wk 5		Wk 4		
• Calculate the area of parallelograms and triangles		Wk 5		Wk 4		
• Recognise when it is possible to use formulae for area and volume of shapes		Wk 5		Wk 4		
• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm ³) and cubic metres (m ³), and extending to other units (e.g. mm ³ and km ³)		Wk 5		Wk 4		Wk 1
• Calculate differences in temperature, including those that involved a positive and negative temperature	Wk 1		Wk 3			Wk 4
• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	Wk 3 time	Wk 4		Wk 2	Wk 6	Wk 1
Key Learning: Geometry - Properties of Shape						
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
• Compare/classify geometric shapes based on the properties and sizes	Wk 4			Wk 3	Wk 5	
• Draw 2-D shapes using given dimensions and angles	Wk 4			Wk 3	Wk 5	
• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius				Wk 3	Wk 5	

• Recognise, describe and build simple 3-D shapes, including making nets	Wk 4			Wk 3		Wk 5
• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles		Wk 3		Wk 3		Wk 5
• Find unknown angles in any triangles, quadrilaterals, regular polygons		Wk 3		Wk 3		Wk 5
Key Learning: Geometry - Position and Direction	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• Describe positions on the full coordinate grid (all four quadrants)			Wks 1 and 2		Wk 4	
• Draw and translate simple shapes on the coordinate plane, and reflect them in the axes			Wk 2		Wk 4	
Key Learning: Statistics	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• <i>Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes)</i>	Wk 4			Wk 3		Wk 5
• Interpret and construct pie charts and line graphs and use these to solve problems		Wk 3		Wk 5		
• <i>Solve comparison, sum and difference problems using information presented in all types of graph</i>		Wk 3		Wk 5	Wk 6	
• Calculate and interpret the mean as an average			Wk 3		Wk 6	