



# Our Mathematical Adventure



## Mathematics – End Points

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Our end points for KS1 and KS2 have been derived from the DfE 'Ready to Progress' documentation which outlines intended end of year goals. It is essential that children have acquired the knowledge and skills detailed below in each year group before embarking on the next year group curriculum. Our Year R end points for **Number** and **Numerical Patterns** have been taken from the **Early Years Foundation Stage Framework (2021)**. **Shape, Space and Measure** is taught as part of the **White Rose** scheme and our curriculum endpoints are taken from the **White Rose Guidance for EYFS** for this area of mathematics.

### Year R

Mathematical area	End of year goal:
Number	<ul style="list-style-type: none"><li>➤ Have a deep understanding of number to 10, including the composition of each number.</li><li>➤ Subitise (recognise quantities without counting) up to 5</li><li>➤ Automatically recall (without reference to rhymes, counting or other aids) number bonds to 5 (including subtraction facts) and some number bonds to 10, including double facts.</li></ul>
Numerical Patterns	<ul style="list-style-type: none"><li>➤ Verbally count beyond 20, recognising the pattern of the counting system.</li><li>➤ Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</li><li>➤ Explore and represent pattern within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.</li></ul>
Shape, Space and Measure	<ul style="list-style-type: none"><li>➤ Select, rotate and manipulate shapes to develop spatial reasoning skills.</li><li>➤ Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</li><li>➤ Continue, copy and create repeating patterns.</li><li>➤ Compare length, weight and capacity.</li></ul>

## Year 1

Mathematical area	End of year goal:
Number & Place Value	<ul style="list-style-type: none"><li>➤ Count forwards and backwards within 100.</li><li>➤ Reason about numbers to 20 in the linear number system.</li></ul>
Number Facts	<ul style="list-style-type: none"><li>➤ Fluently add and subtract within 10.</li><li>➤ Count forwards and backwards in multiples of 2, 5 and 10.</li></ul>
Addition & Subtraction	<ul style="list-style-type: none"><li>➤ Compose and position numbers to 10.</li><li>➤ Read, write and interpret equations.</li></ul>
Multiplication & Division	<ul style="list-style-type: none"><li>➤</li></ul>
Geometry	<ul style="list-style-type: none"><li>➤ Recognise common 2D and 3D shapes.</li><li>➤ Compose 2D and 3D shapes from smaller shapes.</li></ul>

## Year 2

Mathematical area	End of year goal:
Number & Place Value	<ul style="list-style-type: none"><li>➤ Recognise place value in two-digit numbers.</li><li>➤ Reason about two-digit numbers in the linear number system.</li></ul>
Number Facts	<ul style="list-style-type: none"><li>➤ Fluently add and subtract within 10.</li></ul>
Addition & Subtraction	<ul style="list-style-type: none"><li>➤ Add and subtract across 10.</li><li>➤ Solve comparative addition and difference problems.</li><li>➤ Add and subtract within 100.</li></ul>
Multiplication & Division	<ul style="list-style-type: none"><li>➤ Recognise multiplication as repeated addition.</li><li>➤ Relate grouping problems with missing factors and division.</li></ul>
Geometry	<ul style="list-style-type: none"><li>➤ Describe and compare 2D and 3D shapes.</li></ul>

### Year 3

Mathematical area	End of year goal:
Number & Place Value	<ul style="list-style-type: none"><li>➤ Know the equivalence of 10 tens and 1 hundred.</li><li>➤ Recognise the place value in three-digit numbers.</li><li>➤ Reason about three-digit numbers in the linear number system.</li><li>➤ Read scales with 2, 4, 5 or 10 intervals.</li></ul>
Number Facts	<ul style="list-style-type: none"><li>➤ Fluently add and subtract within and across 10.</li><li>➤ Recall multiplication tables.</li><li>➤ Scale number facts by 10.</li></ul>
Addition & Subtraction	<ul style="list-style-type: none"><li>➤ Calculate complements to 100.</li><li>➤ Use columnar addition and subtraction methods.</li><li>➤ Manipulate the additive relationship (inverse/ commutativity)</li></ul>
Multiplication & Division	<ul style="list-style-type: none"><li>➤ Apply the multiplication and division structure.</li></ul>
Fractions	<ul style="list-style-type: none"><li>➤ Use and understand notation.</li><li>➤ Find unit fractions of quantities.</li><li>➤ Reason about fractions within 1 in the linear number system.</li><li>➤ Add and subtract fractions within 1.</li></ul>
Geometry	<ul style="list-style-type: none"><li>➤ Recognise right angles.</li><li>➤ Draw polygons and identify parallel and perpendicular sides.</li></ul>

## Year 4

Mathematical area	End of year goal:
Number & Place Value	<ul style="list-style-type: none"><li>➤ Know the equivalence of 10 hundreds and 1 thousand.</li><li>➤ Recognise the place value in four-digit numbers.</li><li>➤ Reason about four-digit number in the linear number system.</li><li>➤ Read scales with 2, 4, 5 or 10 intervals.</li></ul>
Number Facts	<ul style="list-style-type: none"><li>➤ Recall the multiplication tables.</li><li>➤ Solve division problems with remainders.</li><li>➤ Scale number facts by 100.</li></ul>
Addition & Subtraction	<ul style="list-style-type: none"><li>➤</li></ul>
Multiplication & Division	<ul style="list-style-type: none"><li>➤ Multiply and divide by 10 and 100.</li><li>➤ Manipulate the multiplicative relationship.</li><li>➤ Understand and apply the distributive property of multiplication.</li></ul>
Fractions	<ul style="list-style-type: none"><li>➤ Reason about the location of mixed numbers in the linear number system.</li><li>➤ Convert mixed numbers to improper fractions and vice versa.</li><li>➤ Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</li></ul>
Geometry	<ul style="list-style-type: none"><li>➤ Draw polygons, specified by coordinates or by translation.</li><li>➤ Explore the perimeter of regular and irregular polygons.</li><li>➤ Identify line symmetry in 2D shapes.</li></ul>

## Year 5

Mathematical area	End of year goal:
Number & Place Value	<ul style="list-style-type: none"><li>➤ Recognise tenths and hundredths.</li><li>➤ Recognise the place value in decimal fractions.</li><li>➤ Reason about decimal fractions in the linear number system.</li><li>➤ Reading scales with 2, 4, 5 or 10 intervals.</li><li>➤ Convert between units of measure.</li></ul>
Number Facts	<ul style="list-style-type: none"><li>➤ Secure fluency in multiplication and division facts.</li><li>➤ Scale number facts by 0.1 or 0.01.</li></ul>
Addition & Subtraction	<ul style="list-style-type: none"><li>➤</li></ul>
Multiplication & Division	<ul style="list-style-type: none"><li>➤ Multiply and divide numbers by 10 and 100.</li><li>➤ Find factors and multiples.</li><li>➤ Multiply using a formal written method.</li><li>➤ Divide using a formal written method.</li></ul>
Fractions	<ul style="list-style-type: none"><li>➤ Find non-unit fractions of quantities.</li><li>➤ Find equivalent fractions.</li><li>➤ Recall decimal equivalents for common fractions.</li></ul>
Geometry	<ul style="list-style-type: none"><li>➤ Compare estimate, measure and draw angles.</li><li>➤ Compare and calculate areas.</li></ul>

## Year 6

Mathematical area	End of year goal:
Number & Place Value	<ul style="list-style-type: none"><li>➤ Understand the powers of 10.</li><li>➤ Recognise the place value of numbers up to 10 million.</li><li>➤ Reason about numbers up to 10 million in the linear number system.</li><li>➤ Read scales with 2, 4, 5 and 10 intervals.</li></ul>
Addition, Subtraction, Multiplication & Division	<ul style="list-style-type: none"><li>➤ Quantify additive and multiplicative relationships.</li><li>➤ Derive related calculations.</li><li>➤ Solve problems involving ratio relationships.</li><li>➤ Solve problems with 2 unknowns.</li></ul>
Fractions	<ul style="list-style-type: none"><li>➤ Simplify fractions.</li><li>➤ Express fractions in a common denomination.</li><li>➤ Compare fractions with different denominators.</li></ul>
Geometry	<ul style="list-style-type: none"><li>➤ Draw, compose, and decompose shapes.</li></ul>