

<u>Overview Document</u> <u>2026/2027</u>	Curriculum Area: Maths	Year Group: 9YA
	Personnel Responsible: PPR	Quality Assured by: JPA

Assessment Cycle	Topic/Unit Title – Big Question	Content Coverage	Skill development and links to other areas of this subject's curriculum
1	How Can We Calculate Efficiently?	- Place Value - Addition and Subtraction	This unit develops students' understanding of number, place value and calculation through a structured and progressive approach. Students begin by revisiting numbers to 1,000, ensuring a secure understanding of how to represent and partition numbers into hundreds, tens and ones using models such as part-whole diagrams and number lines. They then build on this knowledge to work with numbers up to 10,000, exploring the relationships between place value columns and representing numbers in a variety of ways, including numerals, words and expanded form. A strong emphasis is placed on recognising the role of zero as a placeholder and understanding how numbers can be partitioned in different ways. Students also develop their skills in comparing and ordering numbers, using appropriate mathematical language and symbols, and applying rounding to the nearest 10, 100 and 1,000. Alongside place value, students strengthen their fluency with calculation, using both concrete resources and formal written methods to add and subtract 3- and 4-digit numbers. They progress from calculations with no exchanges to those involving one or more exchanges, always beginning from the smallest value column to build a secure conceptual understanding. Students also explore how adding and subtracting multiples of 10, 100 and 1,000 affects each place value column, helping them to identify patterns and make generalisations. Problem-solving and reasoning are embedded throughout, with opportunities to estimate, justify answers and make strategic choices about the most efficient methods to use, including the concept of constant difference in subtraction. By the end of the unit, students demonstrate confidence in applying their knowledge of place value and calculation to a range of contexts, supported by strong reasoning and mathematical communication skills.

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2	How Can a Number be Presented?	• Area • Multiplication and division A • Multiplication and division B • Length and perimeter	This unit develops students' mathematical understanding across number, calculation, measurement and geometry, with a strong emphasis on reasoning and making connections. Students begin by exploring the relationship between addition and subtraction, recognising them as inverse operations and using this understanding to check the accuracy of their calculations. They build on their knowledge of number through work on multiplication and division, including identifying factor pairs, understanding commutativity and associativity, and recognising how numbers can be scaled by 10 and 100. Using place value charts and concrete resources, students develop a clear understanding of how digits shift when multiplying and dividing by powers of 10, and how these operations relate to one another. Students apply this knowledge to a range of calculations, progressing from informal methods to formal written methods for multiplication and division. They use representations such as arrays, counters and part-whole models to support their understanding, before moving towards more efficient strategies and mental methods. Alongside this, they explore problem-solving contexts such as finding combinations using multiplication and identifying the most effective methods for solving calculations. A focus on systematic approaches supports students in working accurately and confidently with increasingly complex numbers. Measurement and geometry are also key aspects of the unit. Students explore area by counting squares and comparing shapes, including rectilinear shapes, developing an understanding of how shapes can be constructed and decomposed. They investigate perimeter, learning to calculate the perimeter of rectilinear shapes and rectangles using side lengths, as well as finding missing sides. Real-life contexts, such as measuring distance in kilometres and metres, are used to deepen understanding and link learning to practical applications. Throughout the unit, students are encouraged to explain their reasoning, justify their methods and make connections across different areas of mathematics, building both confidence and fluency.
3	How Can We Break up a Number?	• Fractions • Decimals	This unit develops students' understanding of geometry, fractions and decimals through a structured and interconnected approach. Students begin by exploring the properties of regular polygons, recognising that they have equal side lengths and angles. They apply this knowledge to calculate perimeters using repeated addition and multiplication, and use division to determine unknown side lengths. Alongside this, students deepen their understanding of fractions by identifying equal parts of shapes, interpreting denominators and using visual models such as bar models and number lines to represent and compare fractions, including those

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			greater than one. They learn to partition mixed numbers, convert between mixed and improper fractions, and find equivalent fractions by splitting wholes into equal parts in different ways. Building on this foundation, students develop confidence in calculating with fractions, including adding and subtracting fractions with the same denominator, as well as combining fractions with whole and mixed numbers. Visual representations such as folded paper, shaded diagrams and number lines support conceptual understanding. The unit then extends into decimals, where students explore tenths and hundredths, understanding how these relate to fractions and the whole number system. Using place value charts and concrete resources, students learn how digits shift when multiplying and dividing by 10, and how to represent and sequence decimal numbers accurately. Throughout the unit, students are encouraged to use mathematical language, explain their reasoning and make connections across different areas of mathematics, ensuring a secure and flexible understanding of key concepts.
4	Are Numbers Everywhere?	- Decimals A - Decimals B - Measurement Money - Measurement Time - Geometry Shape - Statistics - Geometry - Position and direction	This unit develops students' understanding of decimals, fractions and geometry, with a strong focus on place value, reasoning and spatial awareness. Students begin by exploring tenths and hundredths, developing confidence in recognising that ten hundredths are equivalent to one tenth and using place value charts and concrete resources to support this understanding. They learn to partition decimal numbers flexibly, recognising the value of each digit, including the role of zero as a placeholder, and comparing and ordering decimals up to two decimal places. Students also connect fractions and decimals, exploring equivalents such as $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$, and using number bonds (to 1 and 100) to support their understanding of how parts combine to make a whole. Throughout, representations such as number lines, bar models and manipulatives are used to deepen conceptual understanding and support accurate reasoning. Alongside number work, students develop their knowledge of shape and space. They explore angles through practical activities, understanding the relationship between turns and angles, and learning to classify angles as acute, right or obtuse. This knowledge is applied when comparing and ordering angles, as well as when identifying and describing shapes. Students investigate the properties of triangles and quadrilaterals, recognising how side lengths and angles relate, and extend their understanding of polygons, including regular shapes. They also

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			explore symmetry, identifying lines of symmetry and completing symmetrical figures using practical tools such as mirrors. The unit further develops students' spatial reasoning through work on coordinates and transformations. Students learn to describe positions using coordinate grids, plot points accurately and draw 2D shapes by connecting given coordinates. They explore translation, understanding how shapes move across a grid without changing size or orientation, and describe these movements clearly. Throughout the unit, students are encouraged to explain their thinking, use precise mathematical language and make connections across different areas of learning, ensuring a secure and well-rounded understanding of key mathematical concepts.
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