	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Theme/Big Idea	Building Strong Foundations: Confident Problem-Solvers Through Connected Number and Algebra Thinking	Making Sense of the World Through Data, Number and Algebra: Building Analytical Thinkers and Confident Problem-Solvers	Developing Logical Thinkers: Connecting Algebra and Geometry Through Reasoning and Problem-Solving	Applying Mathematics in the Real World: Building Confident Analysts and Practical Problem-Solvers	Visualising Relationships: Developing Spatial Reasoning and Mathematical Insight Through Graphs and Transformations	Proportional Thinking: Developing Confident Decision-Makers Through Real-Life Mathematical Connections
Content What are they learning? (including keywords)	<u>Unit 1:</u> **Number** Students will learn to apply the order of operations with positive and negative numbers, simplify calculations through cancelling and inverse operations, and round decimals accurately. They will multiply, divide, and estimate with decimals, including large values and significant figures. Students explore primes, factors, multiples, HCF and LCM using lists, prime factorisation and Venn diagrams. <u>Unit 2:</u> **Algebra** Students will develop algebra skills, using notation, index laws, substitution, expansion and factorisation to create and solve expressions and simple formulae, while building	<u>Unit 3:</u> **Graphs, tables and charts** Students will learn to design, collect and interpret data using tables, charts and graphs, including bar charts, pie charts, histograms, scatter graphs and time series, drawing conclusions and making predictions in meaningful contexts. <u>Unit 4:</u> **Fractions and percentages** Students will develop fluency and depth with fractions, decimals and percentages, applying them to real-life contexts such as finance. <u>Unit 5 (part):</u> **Equations, inequalities and sequences** Students will learn to manipulate and solve linear equations and inequalities, including	<u>Unit 5 (part):</u> **Equations, inequalities and sequences** Students will learn to manipulate and solve linear equations and inequalities, including those with brackets and unknowns on both sides, and apply inverse operations and rearrangement of formulae. They will distinguish between expressions, equations, formulae and identities, and use substitution confidently. Students explore sequences, including finding and using the nth term. <u>Unit 6:</u> **Angles** Students will solve geometric problems using properties of triangles, quadrilaterals and polygons, applying angle rules with parallel	<u>Unit 7:</u> **Averages and range** Students will learn to analyse and compare data using averages, range and frequency tables, while recognising outliers, bias and the importance of sampling. They will estimate and interpret grouped data and understand the strengths and limitations of different representations. <u>Unit 8 (part):</u> **Perimeter, area and volume I** Students develop measurement skills by calculating perimeter, area, surface area and volume of 2D and 3D shapes, solving real-life problems and converting units accurately. This builds confidence in applying mathematics to practical contexts and strengthens problem-	<u>Unit 8 (part):</u> **Perimeter, area and volume I** Students develop measurement skills by calculating perimeter, area, surface area and volume of 2D and 3D shapes, solving real-life problems and converting units accurately. This builds confidence in applying mathematics to practical contexts and strengthens problem-solving and reasoning skills. <u>Unit 9:</u> **Graphs** Students will learn to work confidently with coordinates and graphs, including plotting linear relationships, finding gradients, and interpreting equations such as y = mx + c. They will apply graphs to real-life contexts, including	<u>Unit 11:</u> **Ratio and proportion** Students will learn to understand and apply ratio and proportion in a range of real-life contexts. They will simplify and compare ratios, divide quantities into parts, and solve problems using both unitary and proportional methods. Students explore direct and inverse proportion, including interpreting graphs and linking ratio to gradient. They also investigate value for money and unit conversions using ratio. Through this, students build confidence in reasoning, decision-making and applying mathematical relationships to solve practical problems.

	confidence and mathematical reasoning. **Key vocabulary list in Y10 Foundation Appendix 1**	those with brackets and unknowns on both sides, and apply inverse operations and rearrangement of formulae. They will distinguish between expressions, equations, formulae and identities, and use substitution confidently. Students explore sequences, including finding and using the nth term. **Key vocabulary list in Y10 Foundation Appendix 1**	lines and calculating interior and exterior angles. They use algebra to find missing angles, explore tessellation, and develop clear reasoning and proof skills, building confidence in explaining and justifying increasingly complex geometrical ideas. **Key vocabulary list in Y10 Foundation Appendix 1**	solving and reasoning skills. **Key vocabulary list in Y10 Foundation Appendix 1**	distance-time and rates of change. <u>Unit 10:</u> **Transformations** Students explore transformations — translations, reflections, rotations and enlargements — describing and combining them using precise mathematical language. Through this, they develop spatial awareness, reasoning and the ability to represent and interpret relationships visually, strengthening problem-solving skills across geometry. **Key vocabulary list in Y10 Foundation Appendix 1**	**Key vocabulary list in Y10 Foundation Appendix 1**
Skills How are they learning it?	Apply mathematical thinking to recognise and apply mathematical structure and relationships in numbers and algebra, including factors, powers, patterns and equivalent forms. Use mathematical reasoning to justify numerical and algebraic methods, including estimation, factors, formulae, and symbolic relationships. Use mathematical representations to	Apply mathematical thinking to recognise mathematical patterns, structures, and relationships across data, proportional reasoning, algebra, and sequences. Use mathematical reasoning to analyse relationships, justify methods and conclusions, and interpret mathematical representations across data, number, and algebra.	Apply mathematical thinking to recognise mathematical structures and relationships in algebra, sequences, and geometry, including patterns, congruence, and angle properties. Use mathematical reasoning to justify algebraic and geometric relationships, construct logical arguments, and explain methods and solutions clearly. Use mathematical representations to	Apply mathematical thinking to recognise mathematical structures, patterns, and relationships in data and geometry, including distributions, area, and volume. Use mathematical reasoning to analyse data and measurement, justify methods, and make informed comparisons and conclusions. Use mathematical representations to	Apply mathematical thinking to recognise mathematical relationships, patterns, and structures across geometry, transformations, and linear functions. Use mathematical reasoning to justify methods and relationships in measurement, graphs, and transformations, including similarity, gradients, and conversions.	Apply mathematical thinking to recognise structure in direct and inverse proportion, including links between ratio, graphs, and gradient. Use mathematical reasoning to compare ratios, justify solutions, and interpret proportional relationships in real-life contexts such as value for money and scaling. Use mathematical representations such as

	organise, communicate, and interpret ideas clearly, including diagrams, notation, and structured expressions.	Use a range of mathematical representations to organise, visualise, communicate, and deepen understanding across number, data, and algebra.	communicate ideas clearly and support understanding through notation, models, diagrams, and expressions.	organise, visualise, and communicate information clearly through data models, diagrams, and labelled shapes.	Use mathematical representations to visualise, communicate, and solve problems clearly through diagrams, models, graphs, and coordinates.	ratio notation, tables, and graphs to organise and communicate proportional relationships clearly.
Key Questions	How do inverse operations and cancelling help simplify calculations involving positive and negative numbers and decimals? Why is it important to understand primes, factors, and multiples (including HCF and LCM) when solving mathematical problems involving numbers? How do algebraic techniques like substitution, expansion, and factorisation help in forming and solving mathematical expressions and formulae? Why is it important to understand and apply index laws and correct notation when developing algebraic reasoning and problem-solving skills?	How do different types of graphs (such as bar charts, pie charts, and scatter graphs) help us interpret data and identify patterns or trends? Why is it important to draw conclusions and make predictions from data when analysing real-world situations? What strategies can be used to convert between fractions, decimals, and percentages accurately and efficiently? Why is it important to develop fluency with fractions, decimals, and percentages when making decisions in everyday contexts like budgeting or shopping?	How do inverse operations and rearranging formulae help when solving linear equations and inequalities with brackets or unknowns on both sides? What are the key differences between expressions, equations, formulae, and identities, and how does recognising these differences support problem solving? How can angle rules and properties of shapes (like triangles, quadrilaterals, and polygons) be used together to solve geometric problems? Why is it important to develop clear reasoning and proof when explaining solutions to increasingly complex geometric problems?	How can angle rules and properties of shapes (like triangles, quadrilaterals, and polygons) be used together to solve geometric problems? Why is it important to develop clear reasoning and proof when explaining solutions to increasingly complex geometric problems? How do averages, range, and frequency tables help us analyse and compare different sets of data effectively? Why is it important to understand the strengths and limitations of different data representations when interpreting and making decisions from data? What strategies can be used to convert between different units of measurement accurately when solving practical problems? Why is it important to develop strong	What strategies can be used to convert between different units of measurement accurately when solving practical problems? Why is it important to develop strong measurement and problem-solving skills when applying mathematics in real-world contexts? How does plotting linear graphs and understanding gradients help interpret relationships between variables, such as distance and time? What does the equation $y=mx+c$ represent, and how do the values of m and c affect the graph? How do different transformations — such as translations, reflections, rotations, and enlargements — change the position and size of shapes on a coordinate plane?	How do unitary and proportional methods help solve problems involving ratio and proportion in real-life contexts? What is the difference between direct and inverse proportion, and how can graphs be used to represent these relationships? Why is understanding ratio, including value for money and unit conversions, important for making informed decisions in everyday situations?

				measurement and problem-solving skills when applying mathematics in real-world contexts?	**What** mathematical language and conventions are used to describe and combine transformations accurately?	
Assessment (specific assessed piece(s); milestone(s))	Unit 1 Learning Review. Unit 2 Learning Review. Assessment 1, covering unit 1 and 2. QLA sheets provided from this.	Unit 3 Learning Review. Unit 4 Learning Review. Assessment 2, covering unit 3 and 4. QLA sheets provided from this.	Unit 5 Learning Review. Assessment 3, covering unit 5. QLA sheets provided from this. Unit 6 Learning Review.	Unit 7 Learning Review. Assessment 4, covering units 6 and 7. QLA sheets provided Possibly Unit 8 Learning Review.	Unit 8 Learning Review. Unit 9 Learning Review. Unit 10 Learning Review.	End of year Assessments, covering content from Units 1 – 10. Unit 11 Learning Review.