Curriculum Map – Mathematics Y10 Foundation

	Autumn Term				
Y10	Topic Title Year 10 Autumn Unit 1: Collecting, Organising, Presenting and Analysing Data Big Question: How do I interpret and represent data? How do I calculate and measure of central tendency? How do I analyse data?	Topic Title Year 10 Autumn Unit 2: Primes, Factors and Multiples Big Question: What is the definition of a prime number? How can you find the HCF and LCM of 2 or more numbers?	Topic Title Year 10 Autumn Unit 3: Algebraic Manipulation Big Question: What are algebraic expressions? How do I recognise and use algebraic formulae?	Topic Title Year 10 Autumn Unit 4: Accuracy and Rounding Big Question: How do I approximate and estimate?	Topic Title Year 10 Autumn Unit 5: Mensuration Big Question: How do I define a circles and its parts? What are perimeter calculations? How do I apply area formula to 2d shapes? What is the difference between volume and surface area calculations? What is triangle mensuration?
Links to NC	Infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling Interpret and construct tables and line graphs for time series data, calculate central tendencies.	Use the concepts and vocabulary of prime numbers, factors (or divisors), multiples, common factors, common multiples, HCF, LCM, prime factorisation, including using product notation.	Simplify and manipulate algebraic expressions to maintain equivalence by: collecting like terms multiplying a single term over a bracket taking out common factors expanding products of two binomials. Translate simple situations or procedures into algebraic expressions or formulae.	Apply and interpret limits of accuracy when rounding or truncating.	Identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment. Calculate arc lengths, angles and areas of sectors of circles. Apply Pythagoras' Theorem and trigonometric ratios to find angles and lengths in right-angled triangles.
Assessments	CFU Charts and averages.	CFU Number theory.	CFU Algebraic expressions.	CFU rounding and approximation.	CFU Perimeter, area and volume. End of term paper – amended GCSE Paper.

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	Spring Term					
Y10	Topic Title Year 10 Spring Unit 1: Geometric constructions and calculations Big Question: How do I use a ruler and compass for constructions? How do I apply angle facts to a variety of problems?	Topic Title Year 10 Spring Unit 2: Ratio and Proportion Big Question: How do I link ratio with fractions to help solve ratio problems? What is direct and inverse proportion?	Topic Title Year 10 Spring Unit 3: Percentage Change Big Question: How do I change between fractions, decimals and percentages? How do I use and apply percentages? How do I work out the percentage change of two or more numbers? How do I apply multipliers to growth and decay problems?	Topic Title Year 10 Spring Unit 4: Solving of Equations Big Question: How do I solve algebraic equations? How do I solve algebraic equations using a graph?	Topic Title Year 10 Spring Unit 5: Fractions and Decimals Big Question: How do use the four operations involving fractions and decimals?	Topic Title Year 10 Spring Unit 6: Bivariate Data Big Question: How do I use bivariate data?
Links to NC	Derive and use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle)	Identify and work with fractions in ratio problems. Illustrate direct and inverse proportion Set up equations and solve for missing values.	Interpret percentages and percentage changes as a fraction or a decimal, interpret these multiplicatively Set up, solve and interpret the answers in growth and decay problems, including compound interest.	Solve linear equations in one variable Solve two simultaneous equations in two variables.	Work interchangeably with terminating decimals and their corresponding fractions.	Use and interpret scatter graphs of bivariate data; recognise correlation and know that it does not indicate causation; draw estimated lines of best fit; make predictions; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing.
Assessments	CFU Angle problems.	CFU Ratio and proportion.	CFU Percentage change, growth and decay.	CFU Linear equations and simultaneous equations.	CFU Four operations with fractions and decimals.	CFU Scatter graphs.

Curriculum Map – Mathematics Y10 Foundation

	Summer Term			
Y10	Topic Title Year 10 Summer Unit 1: Indices and Standard Form Big Question: How do I solve questions involving index laws? What is standard form? Why and how do we use standard form? How do use the four operations involving Standard form?	Topic Title Year 10 Summer Unit 2: Equations of graphs and Inequalities Big Question: What are algebraic inequalities? What do graphs of equations and functions look like?	Topic Title Year 10 Summer Unit 3: Compound Units Big Question: How do I convert between different units and measurement? How do I use units and measurement for compound measurements?	Topic Title Year 10 Summer Unit 4: 2D and 3D Representations Big Question: What do the net and plan views look like for three-dimensional shapes?
Links to NC	Calculate with numbers in standard form $A \times 10^n$, where $1 \leq A < 10$ and n is an integer	Represent the solution set on a number line. Solve linear inequalities in one variable. Recognise, sketch, plot and interpret graphs of linear functions	Convert between related compound units (speed, rates of pay, prices, density, pressure)	Construct geometrical constructions and interpret plans and elevations of 3D shapes
Assessments	CFU Calculating with standard form.	CFU Inequalities on a line and solving.	CFU Compound units	CFU Constructions, nets and views.