

KS3 Maths		Autumn	Spring	Summer
Year 7	Units	Place value, Factors, multiples, squares and cubes, Arithmetic procedures with integers and decimals, Expressions and equations	Plotting coordinates, Perimeter and area, Arithmetic procedures including fractions	Fractions and ratio, Transformations
	Key Skills	Students will understand the structure of our place-value system (particularly as it relates to decimals). There is also a focus on factors, multiples and primes, exploring various representations to support understanding of highest common factors and lowest common multiples.	Students are introduced to x- and y-coordinates as input and output of a function. Students will also explore how the formulae for perimeter, area and volume are derived and connected. During this term students will cover the conversion of decimals to fractions (and vice versa), ordering positive and negative integers, fractions and decimals, and the expression of numbers in standard form whilst developing their understanding of the mathematical structures that underpin standard procedures for calculation with decimals, fractions and directed numbers.	Students will explore fractions, percentages, ratio and proportion (direct and inverse) as contexts in which multiplicative relationships are used. This term students will be introduced to translation, rotation, reflection and enlargement. It explores the degrees of freedom available, in terms of what does and doesn't vary for each one.
	Assessment	Mini-white boards, End of topic reviews, Exit tickets, Live marking + feedback	End of Half-term Assessments – 2 per term recorded on Go4Schools using Mastery Grading system	

Year 8	Units	Estimation and rounding, Sequences, Graphical representations of linear relationships, Solving linear equations	Percentages and proportionality, Statistical representations, measures and analysis	Perimeter, area and volume, Polygons, Constructions
	Key Skills	Students focus on the importance of rounding numbers to a required number of decimal places or significant figures. During this term students will cover sequences through exploration of the mathematical structure. It also introduces the idea of the nth term of a linear sequence.	Students will explore fractions, percentages, ratio and proportion (direct and inverse) as contexts in which multiplicative relationships are used. During this term students cover measures of central tendency, work with grouped data and measures of spread, as well as the construction of scatter graphs and pie charts. Part of this work includes making informed choices about which statistical analysis and representation to use for different types of data, as well as the effect on interpretation.	This term includes angle facts and the geometry of intersecting lines. Students will explore how the formulae for perimeter, area and volume are derived and connected, and the importance of reasoning mathematically to solve a range of problems. Students will also encounter how a compass can be used to create triangles of given lengths; a perpendicular bisector of a line segment; a perpendicular to a given line through a given point; an angle bisector.
	Assessment	Mini-white boards, End of topic reviews, Exit tickets, Live marking + feedback	End of Half-term Assessments – 2 per term recorded on Go4Schools using Mastery Grading system	

Year 9	Units	Similarity and Pythagoras' theorem, Probability	Non-linear relationships, Expressions and formulae, Trigonometry	Standard form, Graphical representations
	Key Skills	Students are introduced to similarity and congruence, and Pythagoras' theorem. During this term students will explore probability as a way to quantify, explore and explain likelihood and coincidence, and to reason about uncertainty.	This unit covers sequences through exploration of the mathematical structure. It also introduces the idea of the nth term of a linear sequence. Students will implement the generalisation of number structures, the use of algebraic symbols, and techniques for their manipulation. The rearranging of formulae is also explored. Students are also introduced to trigonometric functions through the unit circle. Ideas of similarity, scale factor and multiplicative relationships are integrated to explore problem-solving.	Students explore the importance of standard form. They are introduced to quadratic functions, and how linear graphs can solve simultaneous equations.
	Assessment	Mini-white boards, End of topic reviews, Exit tickets, Live marking + feedback	End of Half-term Assessments – 2 per term recorded on Go4Schools using Mastery Grading system	

Subject: Mathematics - (Pearson Edexcel GCSE Foundation & Higher)

Key Stage 4:		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10 Foundation	Unit(s):	Geometry and measures: perimeter, area, transformations.	Transformations, probability, volumes and surface areas of prisms.	Volumes and surface areas of prisms, algebra including linear equations.	Algebra: solving equations with brackets and variables on both sides. Ratio and proportion. Percentages.	Ratio and proportion. Percentages and variation.	Statistics, geometry and measure including constructions and loci.
	Key Assessment	Geometry	Probability	Volume and area	Algebra		
	Enrichment and development: Cover the majority of the GCSE specification. • To be able to communicate their reasoning process to their peers using Mathematical language. • To become a more reflective learner in Mathematics. • To understand the different revision techniques required at GCSE.						
Year 10 Higher	Unit(s):	Similarity, applying probability, powers and standard form.	Powers and standard form. Equations and inequalities.	Equations and inequalities.	Counting, accuracy and surds.	Quadratic equations including solving, the quadratic formula and completing the square.	Quadratic equations further including graphing, solving with linear equations.
	Key Assessment	Similarity	Indices	Algebra	Surds	Quadratic equations	End of year exam.
	Enrichment and development: • Cover the majority of the GCSE specification. • To be able to communicate their reasoning process to their peers using Mathematical language. • To become a more reflective learner in Mathematics. • To understand the different revision techniques required at GCSE.						

Year 11 Foundation	Unit(s):	2D geometry. Algebra including numbers and sequences.	Geometry, right angled triangles and trigonometry.	Congruency and similarity. Probability including combined events, tree diagrams.	Powers and standard form.Simultaneous equations and linear inequalities..	Further simultaneous equations, linear inequalities. Non-linear graphs.	Revision
	Key Assessment	Algebra	Trigonometry	Mocks	Past papers	Past papers	GCSE
	Enrichment and development: • To complete the GCSE specification. • To show resilience to all aspects of Mathematics. • To use and act upon feedback from full mock examinations.						
Year 11 Higher		Statistics including collecting data and complex diagrams. Probability.	Circle theorems, variation.	Triangles including 2D/3D problems, trig ratios, solving non-right angled triangles.	Graphs and rates of change.Algebraic fractions and functions.	Further algebraic fractions, vector geometry.	Revision Past Papers
	Key Assessment	Statistics	Circle theorems	Mocks	Past papers	Past papers	GCSE
	Enrichment and development: • To complete the GCSE specification. • To show resilience to all aspects of Mathematics. • To use and act upon feedback from full mock examinations.						
<p>End of course external assessment:</p> <p>Foundation 3 papers of 1hr and 30 minutes each worth one third each. Total 240 marks.</p> <p>Higher 3 papers of 1hr and 30 minutes each worth one third each. Total 240 marks.</p>							