

Curriculum Map for Mathematics: 2021-2022

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y7	<ul style="list-style-type: none"> -Place value and Number sense -Addition and Subtraction -Perimeter -Round and Estimation -Creating representations 	<ul style="list-style-type: none"> -Multiplication and Division -Factors and Multiples -Area -Introduction to Scratch 	<ul style="list-style-type: none"> -Fractions: <ul style="list-style-type: none"> ● Part of a whole ● Adding and subtracting ● Comparing and Ordering ● Fractions as operations -Conjecture, example and proof 	<ul style="list-style-type: none"> -Order of operations -Basic rules of algebra -Substitution -Expanding and factorising -Using variables in Programs 	<ul style="list-style-type: none"> -Angles -Polygons -Symmetry and reflection -Coordinates 	<ul style="list-style-type: none"> -Mean -Two way tables -Venn diagrams
Y8	<ul style="list-style-type: none"> -Indices -Prime factorisation -Rounding -Fractions -Negative numbers review 	<ul style="list-style-type: none"> -Linear equations -Forming and solving linear equations -Creating algebraic models -Coordinates and basic graphs -Programming with Python 	<ul style="list-style-type: none"> -Units of measurement -Angles in parallel lines -Interior and exterior angles -Circumference -Exploring models through graphing 	<ul style="list-style-type: none"> -Proportional reasoning -Fractions, decimals and percentages -Ratio -Modular programming (drawing with Python) 	<ul style="list-style-type: none"> -Fitting a model to data -Area of composite shapes -Presenting and interpreting data -Averages 	<ul style="list-style-type: none"> -Two way tables -3-D visualisation -Volume -Computer systems
Y9	<ul style="list-style-type: none"> -Place value & number properties -Decimals -Estimation and rounding -Indices, powers & roots -Ratio -Proportion 	<ul style="list-style-type: none"> -Calculator use and trigonometry -FDP -Fractions -Percentages -Programming with data structures 	<ul style="list-style-type: none"> -Mathematical notation -Simplifying & index laws -Expanding & factorising -Expressions & substitution -Exploring recurrences 	<ul style="list-style-type: none"> -Linear equations -Linear inequalities -Perimeter & area -Pythagoras -Algorithms and Boolean logic 	<ul style="list-style-type: none"> -Properties of shapes -Angle facts -Circles -Volume -Surface area 	<ul style="list-style-type: none"> -Sequences -Basic vectors -Transformations and matrices using technology -Final programming project

Y10 (F)	-Rearrange formulae -Linear Graphs -Compound Measures	-Quadratic graphs, turning points and roots -Linear simultaneous equations -Further graphs	-Probability -Standard form	-Simple interest -Ratio (further) -Growth and decay	-Statistics	-Plans and elevations -Constructions and loci
Y10 (H)	-Rearrange formulae -Linear Graphs -Compound Measures	-Quadratic graphs, turning points and roots -Further expanding & factorising -Linear simultaneous equations -Further graphs	-Probability -Capture & recapture -Standard Form -Proportion (further)	-Surds -Recurring decimals -Bounds -Growth & decay	-Statistics - no higher -Simple interest =Ratio (further)	-Right angled trigonometry -Plans & elevations -Constructions & loci -Similar shapes
Y11 (F)	-Pythagoras -Right angled trigonometry -Bearings & scale drawings	-Revision	-Transformations -Congruence -Vectors -Similar shapes	Revision	Revision	Exams
Y11 (H)	-Algebraic proof -Solving quadratics & further simultaneous equations -Functions -Iteration -Quadratic inequalities	-Bearings -Circle theorems -Further trigonometry & trigonometric graphs	-Statistics (Further) -Transformations -Congruence -Vectors	-Gradients (Further), and area under a graph -Kinematics -Graphical transformations	Revision	Exams

Y12 (A&A)	<ul style="list-style-type: none"> -Binomial Theorem -Sequences & Series -Exponential -Logs -Permutations & combinations & harder expansions -Polynomials (Factor & remainder theorem) -Introduction to complex numbers 	<ul style="list-style-type: none"> -Functions -Quadratic Functions -Graphs of functions -Rational functions -Sums and products of roots -Modulus & solving equations/inequalities -Graphs of functions 	<ul style="list-style-type: none"> -Radians -Trigonometry -Trig Equations -Vectors (dot and cross product) -Further trigonometry 	<ul style="list-style-type: none"> -Trigonometric Equations -Limits & derivatives -Further trigonometry -Powers and roots of complex numbers 	<ul style="list-style-type: none"> -Tool kit & exploration -Probability -Statistics -Complex Roots -Differentiation 	<ul style="list-style-type: none"> -Tool kit & exploration -Statistics -Differentiation -Probability (HL) -Trig Equations
Y12 (A&I)	<ul style="list-style-type: none"> -Approximations and error -Surds and Exponents -Exponentials/ logarithms -Equations -Sequences and series -Loans and annuities/ -Unit circle and radian measure -Complex Numbers 	<ul style="list-style-type: none"> -Functions -Linear models -Quadratic models -Transformation of functions -Vectors 	<ul style="list-style-type: none"> -Exponential models -Direct and inverse variation -Cubic models -Trigonometric functions -Vector Applications -Non-Linear Modelling 	<ul style="list-style-type: none"> -Sampling and data -Bivariate statistics -Probability/Sets and Venn diagram -Matrices -Eigenvalues and Eigenvectors -Affine Transformations 	<ul style="list-style-type: none"> -Statistics/ Distributions -Tool kit and exploration -Poisson distribution -Estimation and confidence intervals 	<ul style="list-style-type: none"> -Hypothesis testing -Tool kit and exploration -Chi squared hypothesis tests
Y13 (A&A)	<ul style="list-style-type: none"> -Exploration -Integral calculus -Random variables -Reasoning & proof -Partial fractions -Integration -Vectors 	<ul style="list-style-type: none"> -Random variables -Normal distribution -Deductive proofs -Vectors -Systems of equations -Continuous random variables -Volumes of revolution 	<ul style="list-style-type: none"> -Applications of calculus -Revision -1st order ordinary differential equations -Numerical differential equations 	<ul style="list-style-type: none"> Revision -Maclaurin Series 	<ul style="list-style-type: none"> Revision/Exams 	<ul style="list-style-type: none"> Exams

Y13 (A&I)	<ul style="list-style-type: none"> -Measurement -Exploration -Right angled trigonometry -Non-right angled trigonometry -Points in space -Voronoi diagrams -Graph theory 	<ul style="list-style-type: none"> -Differentiation -Properties of curves -Rules of differentiation -Applications of differentiation 	<ul style="list-style-type: none"> -Integration -Applications of differentiation (SL) -Techniques for integration -Definite Integrals 	<p style="text-align: center;">Revision</p> <ul style="list-style-type: none"> -Differential equations -Coupled differential equations 	<p style="text-align: center;">Revision/ Exams</p>	<p style="text-align: center;">Exams</p>
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Some topics are for higher level students only. The rest are studied by standard and higher level students.