KS3 & KS4

- Ratio, proportion and rates of change
- Number
- Shape and space
- Algebra
- Probability
- Statistics

KS5

- Pure
- Mechanics
- Statistics

Year 7

Autumn Term

- Number and the number system
- Checking, approximating and estimating
- Calculating
- Calculations with fractions
- Counting and comparing including negative numbers
- Algebraic proficiency
- Calculating space

Spring Term

- Measuring data
- Visualising and constructing
- Investigating shapes and angles
- Transformations
- Solving equations

Summer Term

- Solving equations (continued)
- Exploring fractions, decimals and percentages
- Calculating fractions, decimals and percentages
- Proportional reasoning
- Presentation of data

Year 8

Autumn Term

- Number and the number system
- Algebraic proficiency: tinkering
- Calculating with standard form
- Solving equations
- Calculating space
- Algebraic proficiency: sequences

Spring Term

- Algebraic proficiency: sequences
- Algebraic proficiency: visualising
- Exploring fractions, decimals and percentages
- Calculating fractions, decimals and percentages
- Understanding risk

Summer Term

- Investigate angles in parallel lines and polygons
- Visualising and constructing
- Presenting and measuring data

Year 9

Autumn Term

- Algebraic proficiency: tinkering
- Calculating with standard form
- Calculating with surds
- Investigate angles in polygons
- Pythagoras Theorem and Trigonometry
- Calculating space

Spring Term

- Calculating fractions, decimals and percentages
- Understanding risk
- Solving equations and inequalities
- Algebraic proficiency: visualising
- Solving equations and inequalities 2

Summer Term

- Proportional reasoning
- Visualising and constructing
- Describing transformations
- Congruency and similarity
- Compound units
- Algebraic proficiency: sequences

Y10 Higher

Autumn Term

Fractions	Indices	Standard form	Algebra: Quadratics	Algebraic Fractions	Surds	Pythagoras and Trigonometry

Spring Term

Percentages	Ratio and proportion	Polygons, angles and parallel lines	Graphs: linear, quadratic and cubic	Circles: Equations of circles and tangents	Simultaneous equations	Functions

Summer Term

Iteration	Product rule for counting	Probability	Quadratic sequences	Volume: cylinders, spheres and cones

Y11 Higher

Autumn Term

- Inequalities
- Representing and interpreting data
- Accuracy and bounds
- Transformations of curves
- Estimation and compound measures
- Similarity and congruence
- Circle Theorems
- Vectors and geometric proof

Spring Term

- Algebraic proof
- Kinematics
- Graphs: reciprocal and exponential
- Construction, Loci and bearings
- Exam preparation and retrieval

Y10 Foundation

Autumn Term

- Integers, place value and decimals
- Indices, powers and roots
- Factors, multiples and primes
- Algebra: the basics
- Expressions, substitution and formulae
- Tables, charts and graphs including pie charts and scatter graphs
- FDP and percentage calculations

Spring Term

- Equations and inequalities
- Sequences
- Perimeter, area and volume
- Properties of shapes, parallel lines and angles facts
- Interior angles of polygons
- Statistics, sampling and averages

Summer Term

- Real life graphs and straight line graphs
- Ratio and proportion
- Pythagoras and Trigonometry
- Transformations

Y11 Foundation

Autumn Term

Probability	Multiplicative reasoning	Plans and elevations	Construction, bearings and loci	Quadratic equations and graphs	Circles, cylinders, shapes and spheres	Fractions and reciprocals	Indices and standard form

Spring Term

Similarity and congruence in 2D	Vectors	Rearranging equations	Graphs of cubic and reciprocal functions.	Simultaneous equations	Exam preparation and retrieval

Y12 Pure

Autumn Term

Algebraic manipulation and quadratic equations. B1, B2, B3.	Simultaneous equations, linear and quadratic inequalities. B4, B5.	Polynomials and the factor theorem. B6.	Graphs and graph transformations. B7, B9.	Sine and cosine rules, 0.5abSinC. Trigonometric graphs and their periodicity. E1, E3.	Using trigonometric identities and solving trigonometric equations. E5, E7.	Binomial expansion. D1.	Coordinate geometry, straight lines and circles. C1, C2.	Differentiation: 1st and 2nd derivatives, first principals, differentiating x^n for integer and rational values of n, sketching gradient functions G1, G2.

Spring Term

Differentiation: Finding tangents, normals, stationary points. Maximising and minimising problems. G3.	Introduction to the fundamental theorem of calculus, integrate polynomials (indefinite). H1, H2.	Definite integration to find areas and work backwards to find the equation of a line given its gradient function and a point. H3.	Proof by deduction, exhaustion and contradiction. A1.	e^x and $\ln x$, logs as the inverse of exponentials, laws of logs. Solving exponential equations. F3, F4, F5.	Exponential and logarithmic graphs, using logarithms to model non-linear relationships, exponential modelling . F1, F2, F6, F7.

Summer Term

Understand and use composite functions, inverse functions and their graphs, extend the factor theorem. B6, B8.	Combining graph transformations and the modulus function. B7, B9.	Recurrence relations, increasing, decreasing and periodic sequences, sigma notation. D2, D3.	Arithmetic sequences and series. D4.	Geometric sequences and series. D5.	Modelling with sequences and series, recognising which type of sequence is appropriate to model a situation. D6.	Binomial expansion with rational and negative powers. D1.	Summer work: Flipped learning of partial fractions. B10.

Y12 Applied

Autumn Term

Understand the language of kinematics and travel graphs. Q1, Q2.	Derive and use the SUVAT equations. Including vertical motion under gravity. Q3. R3.	Vectors. J1, J2, J3, J4, J5.	Newton's first Law, Newton's 2nd law, including using vectors. R1, R2.	Forces vertically (weight), Newton's 3rd Law and connected particles (including pulleys). R3, R4.	Calculate and interpret measures of central tendency and variation. L3.	Interpret diagrams for single variable data. Outliers and cleaning data. L1, L4.	Scatter diagrams. L2.

Spring Term

Probability. M1.	Discrete probability distributions. N1.	The binomial distribution. N1.	Hypothesis testing using binomial distribution. O1, O2.	Sampling methods. K1.

Summer Term

Kinematics - Variable acceleration. Q4.	Conditional probability. M2.	Calculating with the normal distribution, standard normal distribution, finding unknown mean and standard deviation. N2.	Normal distribution - approximating the binomial distribution. N2.

Y13 Pure

Autumn Term

Review summer learning of partial fractions and link to binomial expansion. D1.	Radian measure and small angle approximation. E1, E2, E3.	Reciprocal trig functions and their graphs. Addition and double angle formulas. E4, E5, E6.	Solve equations and construct proofs using the new trigonometric identities. E7, E8.	Differentiate trigonometric, exponential and logarithmic functions. Product rule, quotient rule and chain rule, connected rates of change. Implicit differentiation G2, G4, G5.	Convex and concave sections of curve, points of inflection. G1, G3.	Integrating trigonometric, exponential and logarithmic functions. H2.	Integration by substitution. H5.	Integration by parts. H5.

Spring Term

Integration using partial fractions. Integrating to find area between two curves. H3, H6.	Solving and modelling with differential equations. G6, H7, H8.	Parametric equations. Using parametrics for modelling. Differentiate and integrate parametric curves. C3, C4, G5, H5.	Numerical methods: change of sign, iterative methods and diagrams, Newton-Raphson method, trapezium rule. I1, I2, I3, I4.	Exam preparation and revision.

Y13 Applied

Autumn Term

Be able to decide upon a suitable distribution for a given situation, critiquing assumptions. M3, N3.	Hypothesis testing for means using the normal distribution. O3.	Hypothesis test for correlation coefficients. O1	Extend knowledge of Newton's Second and Third Law to include resolving into components. R2, R3.	Resolving multiple forces meeting at any angle. R5.	Introduction to friction, including on inclined planes. Understand the difference between limiting and non limiting equilibrium. R6.

Spring Term

Projectile motion. Q5.	Moments. S1.	SUVAT and calculus in kinematics with vectors. Q3, Q4.	Large Data Set

Exam preparation and revision.