

## Consett Academy – Mathematics Curriculum 2022-23



46	Autumn Term		Spring Term		Summer Term	
CONSETT ACADEMY	HT1	HT2	НТ3	HT4	нт5	нт6
Year 7	Place Value/Integers and Decimals	Integers and Decimals / Fractions	Expressions / Rounding & Approximation	Rounding & Approximation / Equations	Probability	Formulae
Year 8	2D Shapes	Percentages / Angles	Angles / Statistics	Finance	Ratio & Proportion / Units	Units / Graphs
Year 9	Scale, Constructions & Transformations	Triangles / Sequences	3D Shapes / Properties of Number	Solving Equations / Indices	Indices / Representing Data	Representing Data / Quadratics
Year 10	Fractions / Inequalities	Box Plots & Cumulative Frequency / Area & Perimeter / Formulae / Circles & Sectors / Probability / Proportion	Algebraic Proportion / Percentages / Triple Brackets / Pythagoras' Theorem / Conversions / Iterations / Straight Line Graphs	Straight Line Graphs / Finance / Angle Facts / Compound Units	Calculating & Estimating / Functions / Trigonometric Ratios / Ratio / Expressions / Proof	Histograms / Surface Area & Volume / Trigonometry /
Year 11	Personalised Curriculum based on QLA	Personalised Curriculum based on QLA	Personalised Curriculum based on QLA	Personalised Curriculum based on QLA	Personalised Curriculum based on QLA	Exam period

## **Mathematics Curriculum 2022-23**

	Autumn Term		Spring Term		Summer Term	
CONSETT ACADEMY	HT1	HT2	НТ3	НТ4	нт5	нт6
Year 12 (Maths A Level)	PURE Unit 1 – Algebra Unit 2 – Functions & Graphs Unit 3 – Proof MECHANICS Unit 1 – Constant acceleration STATISTICS Unit 1 – Measures of location & spread Unit 2 – Representations of data	PURE Unit 4 – Trigonometric functions Unit 5 – Exponentials & logarithms Unit 6 - Vectors MECHANICS Unit 2 – Modelling STATISTICS Unit 3 – Correlation & regression Unit 4 – Statistical sampling (inc. large data set)	PURE Unit 7 – Coordinate geometry Unit 8 – Differentiation MECHANICS Unit 3 – Forces STATISTICS Unit 5 - Probability	PURE Unit 9 – Trigonometric identities & equations Unit 10 – Integration Unit 11 – Sequences & series STATISTICS Unit 6 – Statistical distributions	PURE Unit 12 – Numerical methods MECHANICS Unit 4 – Variable acceleration STATISTICS Unit 7 – Hypothesis testing	Personalised curriculum based on QLA
Year 13 (Maths A Level)	PURE Unit 1 – Algebra Unit 2 – Functions & Graphs Unit 3 – Proof Unit 4 – Trigonometric functions MECHANICS Unit 1 – Constant acceleration STATISTICS Unit 1 – Measures of location & spread Unit 2 – Representations of data	PURE Unit 5 – Exponentials & logarithms Unit 7 – Coordinate geometry Unit 8 - Differentiation MECHANICS Unit 2 – Modelling STATISTICS Unit 3 – Correlation & regression	PURE Unit 9 – Trigonometric identities & equations Unit 10 - Integration MECHANICS Unit 3 – Forces STATISTICS Unit 4 – Statistical sampling Unit 5 – Probability	PURE Unit 6 - Vectors Unit 11 - Sequences & series Unit 12 - Numerical methods MECHANICS Unit 4 - Variable acceleration STATISTICS Unit 6 - Statistical distributions Unit 7 - Hypothesis testing	Personalised curriculum based on QLA	Exam period

## Maths Curriculum 2022-23

<b>1</b>	Autumn Term		Spring Term		Summer Term	
CONSETT ACADEMY	HT1	HT2	НТЗ	HT4	нт5	нт6
Year 12 (Further Maths)	CORE PURE Unit 1 – Vectors Unit 2 – Matrices & linear transformations Unit 3 – Complex numbers & the Argand diagram FURTHER MECHANICS Unit 1 – Momentum & impulse	CORE PURE Unit 4 – Roots of polynomials Unit 5 – Series FURTHER MECHANICS Unit 2 – Work, energy & power Unit 4 – Elastic collisions	CORE PURE Unit 6 – Proof by induction Unit 1 – Vectors Review Units 1 – 6 FURTHER STATISTICS Unit 1 – Discrete random variables Unit 2 – Poisson distributions Unit 4 – Hypothesis testing	CORE PURE Review Units 1 – 6 Unit 7 – Volumes of revolution (once integration has been covered in maths) FURTHER STATISTICS Unit 6 – Chi-squared tests	MECHANICS/STATISTICS Personalised curriculum based on QLA PURE (maths) Unit 7 – Differentiation (Year 2 skills needed for Year 2 FM) Unit 8 – Trigonometric identities & equations (Year 2 maths skills needed for Year 2 Core Pure FM)	MECHANICS/STATISTICS Personalised curriculum based on QLA PURE (maths) Unit 9 – Integration (Year 2 skills needed for Year 2 FM)
Year 13 (Further Maths)	CORE PURE Unit 11 – Differential equations FURTHER MECHANICS Unit 1 – Momentum & impulse Unit 3 – Elastic strings & springs	CORE PURE Unit 7 – Volumes of revolution Unit 8 – Methods in Calculus Unit 10 – Hyperbolic functions FURTHER MECHANICS Unit 4 – Elastic collisions	CORE PURE Unit 5 – Series Unit 9 – Polar coordinates Unit 3 – Complex numbers & Argand diagrams FURTHER STATISTICS Unit 3 – Geometric & negative binomial distributions Unit 4 – Hypothesis testing Unit 5 – Central limit theorem Unit 6 – Chi-squared tests	CORE PURE Unit 1 – Vectors Unit 2 – Matrices & linear transformations Unit 4 – Roots of polynomials Unit 6 – Proof by Induction FURTHER STATISTICS Unit 7 – Probability generating functions Unit 8 – Quality of tests	Personalised curriculum based on QLA	Exam period

## **Mathematics Curriculum 2022-23**

CONSETT	Autumn Term		Spring Term		Summer Term	
	HT1	HT2	НТ3	HT4	НТ5	нт6
Year 12 (Core Maths)	PAPER 1 TOPICS  An introduction to core maths  Estimation  Finance	PAPER 1 TOPICS Finance Analysis of data	PAPER 2 TOPICS Critical analysis Statistical techniques	Personalised curriculum based on assessment data  Use of Pre-release material (Available 1st March)	Personalised curriculum based on QLA – regularly using pre- release material	N/A – Final exams before half term