Trinity Academy
Curriculum map – Mathematics

Intent

Our main focus for the curriculum is to incorporate desirable challenge and build up the confidence of students in using maths. The curriculum is sequenced to build on prior knowledge, review, revisit and link topics and incorporate problem solving. We aspire to help our students appreciate the clarity, patterns, and power of Mathematics, and recognise the sense of satisfaction it can provide. The approach we take to teaching our students is that Mathematics is a challenging subject but, this should be embraced, rather than feared. We encourage students to recognise the softer skills developed such as resilience, determination and perseverance.

At Trinity Academy we believe every student can learn and thrive in mathematics regardless of their starting point or any additional needs. This attitude is lived through quoting Albert Einstein, one of the most iconic mathematicians in history, who said "do not worry about your difficulties in mathematics, I can assure you that mine are still greater".

Mathematics and the skills it develops are essential to everyday life, critical to many other subjects and industries, and most, if not all, forms of employment. We, therefore, aim to provide a foundation for numeracy, understanding the maths that is common to everyday life, methodical and deep thinking and the ability to reason and solve problems. We promote its value by creating the realisation that it develops highly sought after and respected skills.

Students have the opportunity to become involved in the UKMT junior, intermediate and senior maths challenges. We celebrate pi day, and actively embrace other opportunities to enrich the experience of students through workshops and lectures.

Implementation

Key stage 3

	Autumn I	Autumn II	Spring I	Spring II	Summer I	Summer II
Year 7	Numbers & Numerals Addition and subtraction Multiplication and Division Factors & Multiples Order of Operations Axioms & Arrays	Positive & Negative Numbers Angles Classifying 2d Shapes	Expressions, equations & inequalities Coordinates Area of 2D Shapes	Units of Measurement Prime Factor Decomposition Conceptualising & Comparing Fractions Operations on Fractions Review Decimals	Ratios Percentages	Congruence & Similarity Transformations Data & Statistics

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TRINITY ACADEMY
LIBERTAS PER CULTUM

Year 8	Powers and Roots Fractions Calculating with fractions Transformations	Positive and negative numbers Sequences Expressions and equations Inequalities	Constructing Triangles and Quadrilaterals Length and Area Rearranging equations	Percentage Change Ratio and Rate Linear Graphs	Rounding and accuracy Circles 3d Shapes and Nets Volume and Surface Area	Statistics Probability
Year 9	Index Laws Coordinates and midpoints Linear graphs Direct and inverse proportion Standard form and Scale	Sequences Expanding and factorising Solving equations and Changing the subject	Congruence Pythagoras' Theorem Angles in Polygons Arcs, Sectors and Volume	Linear equations and inequalities Simultaneous equations Graphical solutions	Probability Working with data Scatter Graph Vector Geometry	Enlargement and Similarity Transformations Trigonometry in right angles triangles

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Key Stage 4

Awarding body: Edexcel

	Autumn I	Autumn II	Spring I	Spring II	Summer I	Summer II
Year 10	**Foundation:** Working with integers Properties of integers Working with fractions Working with decimals **Higher:** Working with integers Properties of integers Working with fractions Working with decimals Rounding and estimation Percentages Powers and Roots	**Foundation:** Rounding and estimation Percentages Powers and Roots Standard Form **Higher:** Standard Form Surds Collecting, Interpreting and Representing Data Analysing Data	**Foundation:** Collecting, Interpreting and Representing Data Analysing Data Properties of Polygons and 3D objects Angles Perimeter Area **Higher:** Basic Algebra Properties of Polygons and 3D objects Angles Perimeter Area	**Foundation:** Basic probability Further probability Ratio **Higher:** Basic probability Further probability Ratio	**Foundation:** Basic algebra Further algebra Equations Functions and sequences **Higher:** Further algebra Equations Pythagoras' theorem	**Foundation:** Formulae Pythagoras' theorem 3D objects Units and measurements **Higher:** Formulae 3D objects Units and measurements Volume and surface area
Year 11	**Foundation:** Basic Algebra Further algebra Equations Formulae Ratio **Higher:** Basic Algebra Further algebra Equations Formulae Ratio	**Foundation:** Transformations in a plane Vector Geometry Volume and surface area Graphs of linear functions **Higher:** Transformations in a plane Vector Geometry Similarity Congruence Graphs of linear functions Interpreting graphs	**Foundation:** Trigonometry Interpreting graphs Inequalities Collecting, Interpreting and Representing Data Analysing Data Basic probability Further probability **Higher:** Circle theorems Trigonometry Graphs of other functions and equations Transformations of curves	**Foundation:** Similarity Congruence Constructions and Loci Proportion Growth and Decay **Higher:** Constructions and Loci Functions and sequences Inequalities Proportion Growth and Decay		

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Key Stage 5

Awarding body: Edexcel

	Autumn I	Autumn II	Spring I	Spring II	Summer I	Summer II
Year 12	Algebraic expressions Quadratics Equations and inequalities Graphs and Transformations Probability Statistical distributions Hypothesis testing	Straight line graphs Circles Algebraic Methods The binomial expansion Data Collection Measures of location and spread Representations of data Correlation	Trigonometric ratios Trigonometric identities & equations Vectors Modelling in mechanics Constant acceleration	Differentiation Integration Forces and motion	Exponentials & Logarithms Variable acceleration	Revision Introduction to Y13 Content Autumn I content.
Year 13	Algebraic Methods Functions & graphs Sequences & series Binomial expansion Moments Forces & friction Projectiles	Radians Trigonometric functions Trigonometry & modelling Applications of forces Further kinematics	Parametric equations Differentiation Numerical Methods Regression, correlation & hypothesis testing Conditional probability	Integration Vectors The normal distribution	Revision Exams	Revision Exams