

Curriculum Overview: Maths
Year group GCSE Enhanced

What your child will learn each half term

This overview shows the key topics, skills, and knowledge your child will be learning in (subject name) across each year group. It helps families understand what's being taught, how it builds on previous learning, and how you can support your child at home.

- **What we are learning:** The topic or focus for the half term.
- **Key knowledge & skills:** What students should understand and be able to do.
- **How we assess learning:** knowledge checks, practical tasks, written responses and formal assessments.
- **Key words to know:** Vocabulary students will learn and use.

Year 10

Half term	What we are learning	Key Knowledge and Skills	How we will assess learning in this unit	Homework	Key vocabulary for this unit
HT 1	Upper and Lower Bounds Algebra Manipulation Statistical Diagrams	Use inequality notation to specify error intervals Apply and interpret limits of accuracy Calculate with limits of accuracy Convert recurring decimals to fractions algebraically. Factorise Quadratics Solve quadratics by factorising Sketch quadratic graphs Complete the square Draw and interpret cumulative frequency curves, box plots and histograms. Compare distributions	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions.	<i>Weekly Fluency Booklet</i> + <i>Weekly Maths Sparx task.</i>	Upper bound Lower bound Limits Recurring Factorise Roots Quartiles Medians Frequency density
HT 2	Indices and Surds Circles Theorems Ratio and Proportion	Evaluate zero, negative and fraction powers Simplify surds Rationalise the denominator Expand Brackets with surds Solve angle problems using circle theorems Solve problems involving direct and inverse proportion	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 1-4	<i>Weekly Fluency Booklet</i> + <i>Weekly Maths Sparx task.</i>	Irrational Rationalise Surds Chord Tangent Radii

HT 3	Sequences Probability Percentages	Recognise and extend geometric and Fibonacci sequences Use recursive sequences Calculating the nth term of a quadratic sequence. Find combinations of sets systematically, using tree diagrams Calculate and interpret conditional probability Understand set notation Interpret and draw Venn diagrams Calculate compound percentages Reverse percentages Solve mixed fraction and % problem	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 5-8	<i>Weekly Fluency Booklet</i> + <i>Weekly Maths Sparx task.</i>	Geometric Recursive Quadratics Combinations Intersection Union Compound Interest Depreciate
HT 4	Congruence and Similarity Linear Graphs Scatter Graphs Sampling	Congruence proofs (using SSS, SAS, ASA, RHS) Calculate missing sides in similar shapes Identify gradient and intercepts Find the gradient between two points. Identify parallel and perpendicular lines Find the equation of a straight line through 2 points. Draw and interpret scatter graphs Find the equation of a line of best fit Understand causation Understand sampling Understand capture-recapture	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 9-12	<i>Weekly Fluency Booklet</i> + <i>Weekly Maths Sparx task.</i>	Congruent Similar Gradient Correlation Causation Random Stratified
HT5	Solving Equations Proofs Volume and Surface Area	Solve equations with fractional terms Expand two or more binomials Rearrange formulae Substitute into a formula Algebraic proofs Calculate the volume and surface area of cones, spheres, pyramids and compound solids.	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions.	<i>Weekly Fluency Booklet</i> + <i>Weekly Maths Sparx task.</i>	Binomial Substitute

HT 6	Simultaneous Equations Trigonometry Graphs	Know the difference between an expression, equation and an identity Solve linear simultaneous equations algebraically and graphically Solve quadratics simultaneous equations algebraically Finding missing sides and angles in right angles triangles Exact trig values for 30 60 45 Plot quadratic, cubic and reciprocal graphs Recognise sin cos and tan graphs	Check knowledge and understanding during class activities and homework tasks. End of year assessment Paper 1 Non-Calculator Paper 2 Calculator Covering Topic 1 -16	<i>Weekly Fluency Booklet + Weekly Maths Sparx task.</i>	Simultaneous Adjacent Hypotenuse Opposite Quadratic Cube Reciprocal
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Year 11

Half term	What we are learning	Key Knowledge and Skills	How we will assess learning in this unit	Homework	Key vocabulary for this unit
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HT 1	Solve inequalities Loci Vector Algebraic fractions	Solve linear inequalities and display on a number line Solve inequalities graphically Solve simple quadratic inequalities Construct perpendicular lines and angle bisectors Solve loci problems Solve problems involving vectors Simplify algebraic fractions Calculate with algebraic fractions	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 13-16	Weekly Fluency Booklet + Ace the Start exam booklet + Weekly Maths Sparx Homework	Inequality Perpendicular Bisect Locus Vector
HT 2	Equation of a circle Graphs Similarity	Apply and understand the equation of a circle. Calculate the equations of tangents from a point on a circle Calculate the gradient of a tangent Calculate the area under a curve Calculate lengths, area and volume of similar shapes/solids	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. MOCK EXAM	Weekly Fluency Booklet + Ace the Start exam booklet + Weekly Maths Sparx Homework	Chord Radius Tangent Segment Gradient Similar
HT 3	Frequency Trees Transformations Functions	Draw and interpret Frequency trees Reflect, rotate, translate and enlarge shapes (inc negative scale factor) Use function notation Calculate inverse and composite functions	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 17-20	Weekly Fluency Booklet + Ace the Start exam booklet + Weekly Maths Sparx Homework	Random Stratified Rotate Reflect Enlarge Translate Invariant Composite Inverse
HT 4	Trigonometry Transforming Graphs Algebraic Fraction Equations	Solve problems involve Trigonometry and Pythagoras in 3D Use and apply the sine and cosine rule Calculate the area of a triangle using $\frac{1}{2}ab\sin C$	Check knowledge and understanding during class activities and homework tasks.	Weekly Fluency Booklet +	Roots

		Sketch translations and reflections of a given function Deduce roots by completing the square Algebraic fractional equations include those which involve solving quadratics Use and apply the quadratic formula	Regularly use exam style questions. Formal 1hr exam Covering Topics 21-24	Ace the Start exam booklet + Weekly Maths Sparx Homework	
HT5	Iteration Revision	Find approximate solutions to equations numerically using iteration Revise key tops Past Paper Practice	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions.	Weekly Fluency Booklet + Ace the Start exam booklet + Weekly Maths Sparx Homework	