Curriculum Overview: Maths
Year group 9 Enhanced

What your child will learn each half term
This overview shows the key topics, skills, and knowledge your child will be learning in **Maths** in **Year 9** on the **Enhanced curriculum**. 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.

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	Rounding and Estimating Algebra Manipulation Averages	Round to decimal places and significant figures. Estimate calculations Calculate upper and lower bounds. Apply bounds to calculations Expand brackets Factorise expressions Use laws of indices Sketch quadratics. Complete the square. Plot and interpret cumulative frequency curves and box plots. Compare data using medians and the IQR	Check knowledge and understanding during class activities and homework tasks.

Formal 1hr exam Covering Topics 1-3 | Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision. | Decimals places Significant figure Approximate Bounds Expression Factorise Substitute Indies Median Cumulative Quartiles Inter-Quartile Range Spread Variation Consistency |
| HT 2 | Indices and Standard Form Area and Perimeter Ratio | Use the laws of indices Evaluate numerically. Simplify surds. Expand brackets involving surds. Convert in and out of standard form. Use calculators to solve problems with numbers in standard form. Calculate arc lengths and sector areas. Use and apply Pythagoras' theorem. Calculate compound measures Understand direct and inverse proportion algebraically | Check knowledge and understanding during class activities and homework tasks.

Formal 1hr exam Covering Topics 4-6 | Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision. | Indices Index Evaluate Standard form Integer Surd Rationalise Area Circumference Arc Sector Hypotenuse Direct Inverse |
| HT 3 | Sequences Probability Fractions | Calculate the nth term of quadratic sequences. Find the common ratio in a geometric sequence Recognise and use Fibonacci sequences. | Check knowledge and understanding during class | Weekly Fluency Booklet + | Term, Pattern Arithmetic, Quadratic Chance, Outcome |

		Use recursive sequences Complete simple proofs List combinations Use experimental probability Complete frequency trees. Complete tree diagrams for dependent and independent events. Use set notation for Venn diagrams. Calculate with mixed numbers Solve percentage problems (reverse and compound). Rationalise simple fractions involving surds.	activities and homework tasks. Formal 1hr exam Covering Topics 7-9	Shorter tasks to consolidate understanding or to assist with revision.	Likely, Unlikely Even chance Fair Biase combinations Simplify Simple Interest Compound interest Depreciate Multiplier
HT 4	Angles Linear Graphs Presenting Data	Use the basic congruency criteria for triangles. Calculate missing sides in similar shapes. Apply y=mx+c to plot lines. Find midpoints of lines segments Find the equation between two points.. Calculate the equations of parallel and perpendicular lines. Plot quadratic graphs Plot and interpret Scatter Graphs. Calculate the equation of the line of best fit	Check knowledge and understanding during class activities and homework tasks. Formal 1hr exam Covering Topics 10-12	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Congruency Similar Gradient Perpendicular Correlation Causation interpolate
HT5	Equation Volume and Surface Area Simultaneous Equations	Solve equations with fractional terms. Form and solve equations. Expand two or more binomials. Rearrange formulae. Substitute values into expressions. Prove simple statements algebraically Calculate the volume and surface area of prisms, pyramids cones and spheres. Solve simultaneous equations	Check knowledge and understanding during class activities and homework tasks.	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Solve Binomial Rearrange
HT 6	Trigonometry Graphs Inequalities Loci	Use trigonometry to find missing sides and angles in right angled triangles. Plot and recognise linear/quadratic/reciprocal and cubic graphs. Solve inequalities and display on a number line. Solvie inequalities graphically. Constructor triangles (link to congruence), bisectors and perpendicular. Solve loci problems	Check knowledge and understanding during class activities and homework tasks. End of year assessment Paper 1 Non-Calculator Paper 2 Calculator Covering Topic 1 -14	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Pythagoras Trigonometry Sine Cos Tan Adjacent Opposite Hypotenuse Reciprocal Loci Inequality