



Curriculum Overview: Mathematics

Year group GCSE Foundation

What your child will learn each half term

This overview shows the key topics, skills, and knowledge your child will be learning in **Maths** across **Year 10 and 11** on the **Foundation 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.

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	Negative numbers Algebraic manipulation Averages	Calculate with negative numbers Simply algebraic expressions, expand brackets, substitute values into expressions. Calculate the mean, median mode and range (including grouped data)	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions.	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Negative Simplify Expression Expand Formula Substitute
HT 2	Number Types Perimeter and area Ratio	Identify factors, multiples and prime numbers. Calculate the HCF and LCM. Understand prime factor decomposition. Convert number in and out of standard form. Calculate the perimeter of shapes. Calculate the area of rectangles, triangles, parallelograms, trapezia and compound shapes. Calculate Area and Circumference of a circle Simplify ratios Solve problems involving ratio	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 1-4	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Factor Multiple Prime Square Cube Area Perimeter Quadrilateral Simplify Share Circumference
HT 3	Sequences Probability Fractions	Extend and generate sequences Calculate the nth term of sequence Calculate probabilities using fractions. Simplifying fractions. Recognise equivalent fractions. Calculate fractions of amounts. Add, Subtract, Multiply and Divide with fractions. Calculate reciprocals	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 5-8	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Term Pattern Arithmetic Quadratic Chance Outcome Likely Unlikely Even chance

		Conver between fractions decimals and Percentages			Fari Biased Simplify Equivalent Numerator Denominator
HT 4	Angles Linear Graphs Presenting Data	Understand types of angles. Calculate missing angles on straight lines, around a point, in triangles and in quadrilateral. Calculate interior and exterior angles in regular polygons. Understand bearings Plot simple linear and quadratic graphs. Calculate and interpret gradients. Interpret real life graphs. Draw and interpret frequency polygons, pie charts, stem and leaf diagrams	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. Formal 1hr exam Covering Topics 9-12	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Acute Obtuse Reflex Regular Interior Exterior Horizontal Vertical Parallel Perpendicular Bearings
HT5	Measures Volume and Surface Area Equations	Solve problems involving time Use milage charts and bus timetables. Calculate compound measures. Interpret Travel Graphs. Calculate the volume of cuboids and other prisms. Calculate the surface area of cuboids. Isometric Drawing. Solve linear equations Solve inequalities and represent inequalities on a number line.	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions.	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	Am Pm 24-hour clock Interval Speed Distance Time Density Volume Faces Edges Vertices Solve
HT 6	Percentages Transformations Decimals Constructions	Calculate percentages of amount. Calculate percentage change. Solve percentage problems. Reflect, rotate, translate and enlarge shapes. Calculate with decimals. Construct simple triangles. Understand the conditions for congruency	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. End of year assessment Paper 1 Non-Calculator Paper 2 Calculator Covering Topic 1 -16	Weekly Fluency Booklet + Shorter tasks to consolidate understanding or to assist with revision.	percent, decimal, tenth, hundredth, equivalent, reflect, rotate, translate and Enlarge Congruence

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
HT 1	Rounding and Estimating Algebra Manipulation Standard Form Circles	Round to decimal places and significant figures. Estimate calculations Calculate upper and lower bounds. Apply bounds to calculations Use and apply the laws of indices Factorise expressions Substitute into expressions including Negative numbers Convert between number in standard form Calculate with numbers in standard form with and without a calculator. Recognise parts of a circle Calculate the area and circumference of circles	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 + Shorter tasks to consolidate understanding or to assist with revision.	Decimals places Significant figure Approximate Bounds Expression Factorise Substitute Indices Standard form Radius Diameter Circumference Sector Segment Arc Chord
HT 2	Linear Graphs Scatter graphs Venn Diagrams Volume and Surface Area	Plotting Linear Graphs Calculate midpoint and gradients Find the equation between two points Find the equation given the gradient and a point. Draw and interpret scatter graphs Use a line of best Understand set notation Use a Venn diagram to sort data Calculate the volume of cylinders, spheres and cones	Check knowledge and understanding during class activities and homework tasks. Regularly use exam style questions. MOCK EXAM	Fluency Booklet + Ace the Start exam booklet + Shorter tasks to consolidate understanding or to assist with revision	Gradient Correlation Intersection Union
HT 3	Percentages Inequalities Formulae Graphs	Calculate percentage profit Simple and compound interest Finding the original amount (reverse percentages problems) Display inequalities on a number line List integer solutions from an inequality Solve inequalities Use a formulae Rearrange a formula	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	Depreciate Interest Loss Compound Investment Integer Subject Quadratic Cubic

		<p>Recognise different graphs</p> <p>Plot quadratics and cubic graphs and find their roots</p> <p>Interpret distance time and velocity time graphs</p>		<p>MathsWatch Past Paper + Shorter tasks to consolidate understanding or to assist with revision.</p>	<p>Speed distance velocity time acceleration</p>
HT 4	<p>Simultaneous Equations</p> <p>Pythagoras and Trigonometry</p> <p>Similarity and Congruency</p>	<p>Solve simultaneous Equations</p> <p>Use and apply Pythagoras' theorem</p> <p>Use trigonometry to find angles and side lengths in right angled triangles</p> <p>Use the basic congruence criteria for triangles (SSS, SAS, ASA, RHS)</p> <p>Find missing length in similar shapes</p>	<p>Check knowledge and understanding during class activities and homework tasks.</p> <p>Regularly use exam style questions.</p> <p>Formal 1hr exam Covering Topics 21-24</p>	<p>Weekly Fluency Booklet + Weekly MathsWatch Past Paper + Shorter tasks to consolidate understanding or to assist with revision.</p>	<p>Simultaneous</p> <p>Pythagoras</p> <p>Hypotenuse</p> <p>Adjacent</p> <p>Opposite</p> <p>congruence</p>
HT5	REVISION	<p>Revision key topics</p> <p>Past Paper Practice</p>			