

Curriculum Overview

Subject: Maths

Year Group: 9



Students in Year 9 will follow Foundation or Higher schemes of work according to their sets and ability. They will undertake assessments every term at the end of every unit they completed to see how they progress. They may move up or down depending on test results.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS Higher: <ul style="list-style-type: none"> • Number • Algebra Foundation: <ul style="list-style-type: none"> • Number calculations • Algebra 	KNOWLEDGE/SKILLS Higher: <ul style="list-style-type: none"> • Interpreting and representing data • Fractions, ratio and percentages • Angles and trigonometry Foundation: <ul style="list-style-type: none"> • Graphs, tables and charts • Fractions and percentages • Equations, inequalities and sequences • 	KNOWLEDGE/SKILLS Higher: <ul style="list-style-type: none"> • Graphs • Area and volume • Transformations and constructions Foundation: <ul style="list-style-type: none"> • Angle geometry • Averages and range • Perimeter, area and volume
KEY ASSESSMENTS <u>Half term 1:</u> Completed Units Assessment(s) <u>Half term 2:</u> Completed Units Assessment(s) Tier of Entry Assessment	KEY ASSESSMENTS <u>Half term 1:</u> Completed Units Assessment(s) <u>Half term 2:</u> Completed Units Assessment(s)	KEY ASSESSMENTS <u>Half term 1:</u> Completed Units Assessment(s) <u>Half term 2:</u> Completed Units Assessment(s) Past Foundation GCSE

Extended reading suggestions and external resources:






Mathswatch - <https://vle.mathswatch.co.uk/vle/>; Mainly used for exam questions based on specific topics

Mathsbot - <https://mathsbot.com/>; differentiated activities to help build key skills as well as worksheets for consolidation of work.

MyMaths - <https://login.mymaths.co.uk/login>

Corbett Maths – <https://corbettmaths.com/>; 5-a-day questions which are good problem solving starter questions for all abilities.

Maths Year 9 Assessment Criteria

	Bronze 	Silver 	Gold 	Platinum 
Number	Add and subtract positive and negative numbers (integers). Multiply or divide any number by powers of 10. BIDMAS. Add and subtract decimals. Rounding to any given SF. Squares, cubes and their roots. Prime numbers, HCF and LCM.	Multiply and divide positive and negative numbers (integers). Multiply or divide any number by 0.1, 0.01 and 0.001. Laws of indices (x/\div and brackets). Multiply and divide decimals. Estimating answers to calculations. Solve simple problems using HCF, LCM and prime numbers. Converting numbers to standard form.	Upper and lower bounds Calculations with upper and lower bounds. Standard form with numbers less than and greater than 1. Standard form and calculations (x/\div). Laws of indices. Simple surds. Simple surds (x/\div).	Rounding error in calculations. Negative indices. Fractional indices. Standard form calculations (+/-). Problems with standard form. Simplifying surds. Rationalising denominators.
Algebra	Simplifying expressions. Expand and simplify two single brackets. Factorising linear expressions. Substitute into formulas. One step rearranging formulas. Solving simple equations. Inequalities on a number line. Nth term.	Simplifying expressions with powers. Expanding double brackets. Factorising quadratics. Write formulas. Two step rearranging formulas. Writing your own formulas and equations. Solving inequalities. Solving problems using nth term.	Expanding double brackets and factorising quadratics. Rearranging more complex formulas. Solving equations with unknowns on both sides. Quadratic sequences. Geometric sequences. Gradients. Equations of straight line graphs. Quadratic graphs.	Factorising quadratics including the difference of two squares. Rearranging formulas - powers and roots. Solve equations with fractions. Nth term of a quadratic sequence. Generating a geometric sequence. Parallel and perpendicular lines. Cubic and reciprocal graphs. Equation of a circle.
Fractions and decimals	All four operations with fractions. An amount as a percentage of another. Converting between fractions, decimals and percentages. Percentages of an amount with and without a calculator.	All four operations with fractions and/or mixed numbers. Percentages increase/decrease. Compound interest. Simplifying and using ratios.	Reverse percentage. Problem solving involving compound interest. Direct proportion. Direct proportion formula.	Applying percentages to real life problems. Indirect proportion. Indirect proportion formula. Problem solving involving direct and indirect proportion.

Geometry	<p>Angles on a line and around a point. Properties of 2d and 3d shapes. Angles in parallel lines. Converting metric units. Area of triangles, rectangles, parallelograms and trapezia. Volume of cuboids. Transformations.</p>	<p>Angles in triangles and quadrilaterals. Circumference and area of a circle. Angles in parallel lines and 2D shapes problems. Converting metric units for area and volume. Compound area. Volume of prisms. Surface area.</p>	<p>Angles in parallel lines. Angles in polygons. Pythagoras' theorem. Trigonometry. Volume of cones and pyramids. Describing transformations. Combination of transformations.</p>	<p>Problem solving involving angles and algebra. Pythagoras in 3D. Exact values of Trig. Length of an arc, area of a sector. Volume and surface area of a cone and sphere. Volume of frustrems. Constructions and loci.</p>
Probability and data	<p>Two way tables. Timetables and tables. Pictograms and bar charts. Reading pie charts. Scatter Graphs. Mean, median, mode and range.</p>	<p>Mode and modal class from frequency tables. Dual/comparative bar charts. Interpreting stem and leaf diagrams. Drawing pie charts. Median, mean and range from tables. Averages from charts.</p>	<p>Averages for grouped data. Pie charts - reading and comparing. Frequency Polygons. Cumulative frequency. Venn diagrams. Theoretical and experimental probability.</p>	<p>Interpreting averages. Comparing frequency polygons. Interquartile range. Interpreting cumulative frequency. Calculating probabilities using Venn diagrams. Conditional probability.</p>