



Roundwood Park School Curriculum Map – Maths (YR10)

A curriculum that stimulates curiosity, values diversity and offers challenge.

We help every student to love learning for life, to follow their passions and to reach their full potential.

Year 10	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	Standard Form Indices and Surds Rearranging Formula	Enlargement and Similarity Pythagoras and Trigonometry Quadratics	$Y=mx+c$ Simultaneous Equations Inequalities	Percentages Fractions Area and Volume	Sequences Constructions and Loci Angles	Transformations Rounding Ratio
Key Knowledge or Enquiry Question	Standard form Calculations, Applications Negative and fractional indices, Change of base, Simplify surds, calculations with surds, rationalise the denominator, Rearrange nonlinear formula, change where unknown appears twice	Enlargement including negative and fractional, Similarity, Square and cube conversions, 3D Pythagoras, Unit circle, Trigonometric ratios, lengths of side and angles, exact values, bearings problems, Factorise, expanding, Difference of two squares, Factorise quadratics where $a>1$, Completing the square, roots and turning points, plotting, quadratic formula	Review of year 9 straight lines, Identify parallel and perpendicular lines and find their equation, find equation from two points, Interpret the gradient of a straight line as a rate of change, Find approximate solutions to simultaneous equations using graphs, Solve by elimination, solve where one is a quadratic, Solve linear and quadratic inequalities, graph inequalities	Percentage increase/decrease including multipliers, reverse percentages, simple and compound interest problems, percentage change, Arithmetic including mixed numbers, Algebraic fractions, converting recurring to fraction, Area of 2D shapes, parts of a circle, surface area and volume of 3D shapes, arc length and area of sector	Quadratic sequences first and second difference, nth term, Fibonacci Sequences, geometric sequences, Understand the meaning of locus, solve loci problems including perpendicular bisector and angle bisector, constructing triangles, Review Angles work from year 9, circle theorems	Multiple transformations and invariance, Rounding errors and error intervals, Truncating vs rounding, Approximations to calculations, Percentage error, Simplifying ratios, ratio problems.
Concepts	Students will be developing critical thinking skills as we nurture a classroom culture in which mathematical discussions is part of the daily routine. Students will be developing problem solving skills through the more challenging questions in each lesson and are encouraged to work systematically, reason logically and to look for patterns. Students will be encouraged to spend time reflecting upon teacher feedback following home learning, practice papers or mocks.					
Key Vocabulary	Standard form, Significant figure, Power, Indices, Indices, Formula, Change of subject,	Product, Variable, Term, Coefficient, Factorise, Similar, Congruent, Scale factor, Conversion, Sine, Cosine, Tangent, Opposite, Adjacent, Hypotenuse, Ratio, Roots, Formula	Inequality, Mixed number, Inequality, Solve, Solution set, Integer Sketch Plot, Gradient, Y-intercept, Coefficients, Roots, Equation, Simultaneous, Variable, Manipulate, Eliminate	Multiplier, Percentage, Percentage change, Interest Improper fraction, Terminating, Recurring, Circle, Pi, Radius Diameter, Chord, Circumference, Tangent, Sector, Arc, Segment	Term to Term, Position to Term, nth term, Linear, Quadratic, Fibonacci, Geometric, Angles, Alternate, Corresponding, Co-interior, Interior, Exterior, Construct, Loci, Arc, Circle theorems	Transformation, Invariance, Ratio, Truncate, Round, Maximum, Minimum, Decimal place, Significant figures, parts and wholes
ASPIRE Habits	Making links	Persevere	Communicate	Practice	Think creatively	React
Reading Opportunities	Chaos James Gleik		The Wonder Book of Geometry David Acheson		Do Dice Play God? Ian Stewart	