

Roundwood Park School Curriculum Map – Maths (YR9)

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 Group 9	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	Standard Form Algebraic Sequences Linear Inequalities	Rearranging Formula $Y=mx+c$ Indices	Angles Construction/Loci Rounding Fractions	Simultaneous Equations Ratio/Proportion Quadratics Percentages	Units and Graphing Probability Segments and Sectors	Enlargement/Similarity Charts and Averages Trigonometry
Key Knowledge or Enquiry Question	Standard form Calculations, Applications of standard form, Quadratic sequences first and second difference, Fibonacci Sequences, Use four inequality symbols, Solve linear inequalities, Use number lines to find the set of values	Rearrange nonlinear formula, Represent equations in the form $y=mx+c$, Read gradient and intercept from a graph, Sketch a graph given gradient and intercept, Identify parallel lines, Interpret the gradient of a straight line as a rate of change, Negative and fractional indices, Change of base	Review Angles work from year 8, Understand the meaning of locus, Solve loci problems including perpendicular bisector and angle bisector, Rounding errors and error intervals, Truncating vs rounding, Approximations to calculations, Percentage error, Algebraic fractions	Find approximate solutions to simultaneous equations using graphs, Solve simultaneous equations by elimination, Recognise direct and inverse proportion, Proportion graphs, Equivalency symbol, Difference of two squares, Factorise quadratics where $a>1$, Review percentages.	Compound units – density pressure speed, conversions between compound units, Real-life graphs, Frequency trees, Two way tables, Venn diagrams, Tree diagrams for independent events, Theoretical and Relative frequency, Know the vocabulary of circles, Arc length, Area of a sector	Enlargement including negative and fractional enlargements, Multiple transformations and invariance, Similarity, Conversions between square and cube units, Review of charts and averages from year 8, Unit circle, Trigonometric ratios, Use trigonometry to find lengths of side and angles
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 end of unit tests home learning or end of term assessments. Where multiple solutions are possible discussion will be encouraged to discuss the benefits and drawbacks of each solution.					
Key Vocabulary	Standard form, Significant figure, Power, Indices, Term, Term to Term, Position to Term, nth term, Linear, Quadratic, Fibonacci, Inequality, Solve, Solution set, Integer	Indices, Formula, Change of subject, Sketch Plot, Gradient, Y-intercept, Coefficients, Roots	Angles, Alternate, Corresponding, Co-interior, Interior, Exterior, Polygon, Construct, Loci, Locus, Arc, Inequality, Truncate, Round, Maximum, Minimum, Decimal place, Significant figures, Mixed number, Improper fraction, Terminating Recurring	Equation, Simultaneous, Variable, Manipulate, Eliminate, Solve, Direct proportion, Inverse proportion, Multiplier, Product, Variable, Term, Coefficient, Factorise, Percentage, Percentage change, Interest	Compound units, Velocity, Density, Pressure, Speed, Conversion, Probability, Theoretical, Experimental, Event, Outcome, Mutually exclusive, Sample space, Circle, Pi, Radius, Diameter, Chord, Circumference, Tangent, Sector, Arc, Segment	Similar, Congruent, Scale factor, Conversion, Transformation, Invariance, Categorical, Discrete, Continuous, Frequency, Average, Spread, Mean, Median, Mode, Range, Statistics, Sine, Cosine, Tangent, Opposite, Adjacent, Hypotenuse, Ratio, Angle
ASPIRE Habits	Persevere	Practise	Making links	Focus	Collaborate	Think logically
Reading Opportunities	The maths of life and death Kit Yates		Humble Pie Matt Parker		The Simpsons and their mathematical secrets Simon Singh	