Roundwood Park School Curriculum Map – Maths (YR11)

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 11	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	Proportion Non-right-angled triangles (H) Graphs	Functions (H) Probability Statistical Calculations	Sampling Vectors Statistical Graphs Iteration (H)	Units and Graphing Algebraic Proof (H) Revision	Revision Exams	Exams
Key Knowledge or Enquiry Question	Recognise direct and inverse proportion, Proportion graphs, Compound units – density pressure speed, Cosine rule, Sine rule, Area of a triangle, Conversions between compound units, Real-life graphs, Cubic, trig, exponential and reciprocal graphs	Functions, composite functions, inverse functions, Frequency trees, Two-way tables, Venn diagrams, Tree diagrams for independent events, Theoretical and Relative frequency, Algebraic problems, Calculating averages and range, boxplot, cumulative frequency	Methods of sampling, Capture/recapture, Using vector notation, Calculations with vectors, Use vectors to construct geometric proofs and arguments, Histograms, Bar charts and graphs, Scatter graphs, Frequency polygons, find approximate solutions using iteration	Find gradient of a cure, Area under a graph, Compound measures Proof of an expression is a multiple, algebraically represent consecutive numbers and different types of numbers, eg. Odd and evens	Revision	
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 exam paper practice and mock exams.					
Key Vocabulary	Compound units, Velocity, Density, Pressure, Speed, Conversion, Acceleration, Inverse, Direct, Constants, cosine, sine	Composite, inverse, transformations, Probability, Theoretical, Experimental, Event, Outcome, Mutually exclusive, Sample space, Continuous, Frequency, Average, Spread, Mean, Median, Mode, Range, Interquartile, Cumulative frequency	Stratified sampling, random sampling, capture/recapture, proportion, column vectors, co-linear, parallel, frequency, axis, correlation, data, mid-points, grouped data, iteration, solutions, approximate, rearrange formula	Gradient, tangent, area, trapeziums, speed, distance, acceleration, proof, consecutive, multiples, factors, sum, difference, product		
ASPIRE Habits	Making Links	Think Logically	Persevere	Persevere		
Reading Opportunities	The Wonder Book of Geometry David Acheson		Do Dice Play God? Ian Stewart		Infinite Powers Steven Strogatz	