

Roundwood Park School Curriculum Map – Maths (YR13 Further Maths)

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 13	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	Further Core	Further Core	Further Statistics	Further Mechanics	Further Core and Applied	
Key Knowledge or Enquiry Question	Complex numbers, series, methods in calculus, volumes of revolution	Polar coordinates, hyperbolic functions, methods in differential equations, modelling with differential equations	Chi-squared tests, probability generating functions, quality of tests, discrete random variables, Poisson distributions, Geometric and negative binomial distributions, hypothesis testing	Elastic strings and springs, elastic collisions in one dimension, elastic collisions in two dimensions	Revision	
Concepts	Students will be developing critical thinking skills as we nurture a classroom culture in which mathematical discussion 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	Modulus, complex number, imaginary number, complex conjugate, Argand diagrams, argument, Maclaurin series, improper integral, mean value, radians	Sector, pole, initial line, hyperbolic, inverse hyperbolic function, integrating factor, auxiliary, non-homogeneous, differential equation, particular integral, damped harmonic motion, forced harmonic motion	Random, mean, variance, geometric, Poisson distribution, null hypothesis, goodness of fit, degrees of freedom, discrete random variable, power function	Elastic, inelastic, compression, tension, impulse, coefficient of restitution, oblique collisions	Revision	
ASPIRE Habits	Think logically	Communicate	Organise	Plan	Practise	
Reading Opportunities	Infinite Powers Steven Strogatz		Numbers Don't Lie Vaclav Smil		The Great Mathematical Problems Ian Stewart	

Note: Topic order may vary