

## Roundwood Park School Curriculum Map – Maths (YR12 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 12	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	AS Further Core	AS Further Core	AS Further Core	AS Further Core	AS Further Statistics	AS Further Mechanics
Key Knowledge or Enquiry Question	Complex numbers, Argand diagrams	Series, roots of polynomials, volumes of revolution	Matrices, linear transformations	Proof by induction, vectors	Discrete random variables, Poisson distributions, Geometric and negative binomial distributions, hypothesis testing, central limit theorem	Momentum and impulse, work, energy and power
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	Series, integers, cubic, quartic, roots, polynomial,	Matrix, singular, non-singular, inverse, minor of a matrix, transpose, cofactor, consistent, image, plane	Induction, Cartesian, basis, assumption, scalar, vector, skew	Distribution, binomial, continuous and discrete data	Momentum, impulse, work, component, kinetic energy, potential energy, power
ASPIRE Habits	Persevere	Make links	Collaborate	Plan	Question	Practise
Reading Opportunities	17 Equations That Changed the World Ian Stewart		Is Maths Real? Eugenia Cheng		The Art of Statistics David Spiegelhalter	

Note: Topic order may vary