

Roundwood Park School Curriculum Map – Maths (YR12 Single 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 Pure | AS Pure | AS Pure | AS Pure | AS Applied | AS Applied |
| | Algebraic expressions, | Algebraic methods, | Trigonometric identities | Differentiation, | Data collection, measures | Modelling in mechanics, |
| Key Knowledge | graphs and | binomial expansion, | and equations, vectors | integration, exponentials | of location and spread, | constant acceleration, |
| or | transformations, | Trigonometric ratios | | and logarithms | correlation, probability, | forces and motion, variable |
| Enquiry | quadratics, equations and | | | | statistical distributions, | acceleration |
| Question | inequalities, straight line | | | | hypothesis testing | |
| | graphs, circles | | | | | |
| 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 | Indices, domain, range, | Deduction, exhaustion, | Identity, principal value, | Integral, derivative, | Correlation, distribution, | Lamina, variable |
| | turning point, | counter-example, | resultant, magnitude, | stationary point, point of | skew, continuous and | acceleration, displacement, |
| | discriminant, | factorial, periodic, sine, | position vector | inflection, turning point, | discrete data | velocity, resultant force, |
| | perpendicular bisector | cosine, tangent | | tangent, exponential, | | distance speed |
| | | | | logarithm, constant of | | |
| | | | | integration, natural | | |
| | | | | logarithm | | |
| | | | | | | |
| | | | | | | |
| ASPIRE Habits | Persevere | Make links | Collaborate | Plan | Question | Practise |
| Reading | Humble Pi | | How Not to Be Wrong | | Fermat's Last Theorem | |
| Opportunities | Matt Parker | | Jordan Ellenburg | | Simon Singh | |

Note: Topic order may vary