MATHEMATICS Curriculum Overview

Curriculum Intent: To change the lives and shape the future of our pupils through the development of mathematical knowledge, skills and understanding.

Curriculum Rationale: We aim to facilitate long term learning that creates relatively permanent changes in fluency and comprehension as well as developing knowledge, understanding and skills that will support lifelong retention, through application of an enriching learning journey.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Exploring sequences Understand and use algebraic notation Equality and equivalence Place value & ordering integers & decimals	Place value & ordering integers & decimals Fraction, decimal & percentage equivalence Solving problems with addition & subtraction	Solving problems with multiplication & division Fractions & percentages of amounts Operations & equations with directed number	Addition & Subtraction of Fractions Constructing, measuring & using geometric notation	Developing geometric reasoning Sets & probability	Prime numbers & proof
Year 8	Ratio & scale Multiplicative change Multiplying & dividing fractions Working in the Cartesian plane	Working in the Cartesian plane Representing data Tables and probability Brackets, equations & inequalities	Brackets, equations & inequalities Algebraic techniques: sequences Algebraic techniques: indices Fractions & percentages	Standard index form Developing number sense Angles in parallel lines & polygons	Area of trapezia & circles Line symmetry & reflection The data handling cycle	The data handling cycle Measures of location
Year 9	Straight line graphs Forming & solving equations Testing Conjectures Three dimensional shapes	Constructions & congruency Numbers Using percentages	Maths and Money Deduction Rotation and translation	Pythagoras' theorem Enlargement and similarity Solving ratio and proportion problems Rates	Rates Probability Algebraic representations	Algebraic representations
Year 10 Foundation	Number Algebra	Graphs, tables and charts Fractions, and Percentages	Equations, inequalities and sequences Angles	Averages and range Perimeter area and volume	Graphs Transformations	Ratio and Proportion Right-angled triangles
Year 10 Higher	Number Algebra	Interpreting and representing data Fractions, ratio and proportion Angles and trigonometry	Angles and Trigonometry Graphs	Area and volume Transformations and constructions	Equations and inequalities Probability	Probability

Year 11 Foundation	Probability Multiplicative Reasoning Constructions, loci and bearings	Quadratic Equations and graphs Perimeter, area and volume	Fractions, indices and standard form Congruence, similarity and vectors More algebra	Responsive summer curriculum	4-week plan and bespoke curriculum	
Year 11 Higher	Multiplicative Reasoning Similarity and Congruence More Trigonometry Further Statistics	Equations and Graphs	Circle theorems More algebra Vectors and geometric proof Proportion and graphs	Responsive summer curriculum	4-week plan and bespoke curriculum	
Year 12 and 13	Topic 1 – Proof Topic 2 – Algebra & functions Topic 3 – Coordinate geometry in the (x, y) plane	Topic 4 – Sequences & series Topic 5 – Trigonometry Topic 6 – Exponentials & logarithms	Topic 7 – Differentiation Topic 8 – Integration Topic 9 – Numerical methods	Topic 10 – Vectors Topic 1 – Statistical sampling Topic 2 – Data presentation and interpretation	Topic 3 – Probability Topic 4 – Statistical distributions Topic 5 – Statistical hypothesis testing	Topic 6 – Quantities & units in mechanics Topic 7 – Kinematics Topic 8 – Forces & Newton's laws Topic 9 – Moments

Useful Websites to support independent study		
Key Stage 3	Ket Stage 4	Key Stage 5
Mr Morley Maths Sparx Maths MathsBot.com - Tools for Maths Teachers	Include links to: **Exam Board Spec** Maths GCSE | Edexcel GCSE Mathematics (2015) | Pearson qualifications **Sample Papers** Maths Genie • Edexcel GCSE Maths Past Papers, Mark Schemes, Model Answers and Video Solutions **Revision Sites** Mr Morley Maths Maths Genie - Free Online GCSE and A Level Maths Revision Sparx Maths MathsBot.com - Tools for Maths Teachers onmaths | The home of GCSE Maths The GCSE Maths Tutor from YouTube | 100% Student Pass Rate	Include links to: **Exam Board Spec** A level Mathematics (pearson.com) **Sample Papers** Maths Genie - Free Online GCSE and A Level Maths Revision Resourceaholic **Revision Sites** Maths Genie - Free Online GCSE and A Level Maths Revision Resourceaholic Maths Teaching Resources | Dr Austin Maths