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 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 Representing data Tables and probability	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 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 Probability Algebraic representations
Year 10	Congruence, similarity & enlargement Trigonometry	Representing solutions of equations & inequalities Simultaneous equations	Angles & bearings Working with circles Vectors Ratios & fractions	Percentages & interest Probability	Collecting, representing & interpreting data Non- calculator methods	Types of number & sequences Indices & roots Manipulating expressions
Year 11	Gradients & lines Non-linear graphs Using graphs	Expanding & factorising Changing the subject Functions	Multiplicative reasoning Geometric reasoning Algebraic reasoning	Transforming & constructing Listing & describing Show That…		
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