

Maths Curriculum Map

The Mathematics Curriculum at St Monica's has been designed to develop curious, resilient problem solvers, who listen to, and value the opinion of others. By building confidence through a particular sequence of learning, learners will be able to grapple with difficult tasks, and give reasoning behind what they are doing. They will learn real life skills that will enable them to make intelligent financial decisions, be open minded and tough opponents for issues they face. They will have a love of maths and number and enjoy the challenge that difficult situations bring.

KS2	Time	7	8	9	10	11	KS5	Careers
<u>Number</u> Place value Addition, Subtraction, Multiplication, and division Fractions Decimals Percentages Basic Algebra Ratio <u>Geometry</u> Perimeter and Direction Properties of shape <u>Measurement</u> Perimeter, Area and volume Converting Units	Autumn Term 1	<u>Number skills</u> <u>Expressions,</u> Developing student knowledge of function machines, substitution and simple formulae	<u>Multiplicative Reasoning</u> <u>Factors and Powers</u> Students apply Y7 knowledge to ratio to tackle real life perimeter and volume	Number, Factors, Multiples and primes Indices and Standard Form Rounding, Bounds and Surds	Higher Perimeter, area and volume Foundation Averages and range and Perimeter, area and volume	Higher Further Statistics and Equations and graphs Foundation Perimeter, Area and Volume 2	<u>Loreto College</u> Maths Further Maths Accounting <u>Xaverian</u> <u>College</u> Maths Further Maths Accounting <u>Holy Cross</u> <u>College</u> Maths Further Maths	Acoustic consultant Actuarial analyst Actuary Astronomer Chartered accountant Data analyst Data scientist Investment analyst Research scientist Secondary school teacher Software engineer Sound engineer Statistician Architect CAD technician Financial manager Financial trader Game designer Insurance underwriter Machine learning engineer Meteorologist Operational researcher Quantity surveyor Radiation protection practitioner Joiner Electrician Carpet Fitter
	Autumn Term 2	<u>Decimals</u> <u>Equations</u> Linked to real life problems including money, utilities and then more complex problems	<u>Algebra</u> <u>Equations and Inequalities</u> Develop understanding of inequality signs	<u>Algebra</u> Expressions and equations Expanding and factorising quadratics Formula, Substitution and Sequences	Higher Transformations and Constructions Foundation Transformations and Ratio	Higher Circle Theorems Foundation Fractions, Indices and Standard Form		
	Spring Term 1	<u>Angles and Shapes</u> <u>Fractions</u> This builds on students' spatial knowledge, looking at different shapes and their properties.	<u>Transformations</u> Students link their learning of translations, enlargements and rotations to real life <u>Graphs</u> straight line graphs, including the real-life applications of gradients.	<u>Data</u> Averages, Range and Scatter Graphs Pie charts and 2way tables	Higher Equations and Inequalities Foundation Right Angled Triangles and Probability	Higher More Algebra Foundation Similarity, Congruence and Vectors		
	Spring Term 2	<u>Perimeter, Area and</u> <u>Volume</u> <u>Percentages</u> They will learn how to increase and decrease percentages as well as calculating percentage change	<u>Probability</u> Chance, experimental, and theoretical probability. 2D Shapes and 3D solids	<u>Fractions, decimals, percentages,</u> <u>ratio and proportion</u> Develop knowledge of percentages through multipliers and reverse percentages to enable employability and key knowledge needed for retail and financial competence	Higher Probability and Multiplicative Reasoning. Foundation Multiplicative Reasoning	Higher Vectors, Geometric Proof and Graphs Foundation More Algebra		
	Summer Term1	<u>Sequences and Graphs</u> Students build on their knowledge from the algebra units and apply that to sequencing and graphing.	<u>Construction and Loci</u> Constructing angles with a ruler and protractor and line segments with a ruler by being introduced to the compass construction tool.	<u>Angles and Right-angled triangles</u> Develop knowledge of angles through deriving and applying the laws of angles in parallel lines and angles in polygons Pythagorus' Theorem	Higher Congruence and Similarity Foundation Construction, Loci and Bearings	Revision for both Higher and Foundation Students		
	Summer Term 2	<u>Analysing and displaying</u> <u>data</u> Scatter graphs and bar charts. They will calculate averages to understand meaningful data. Misleading statistics.	<u>Real life graphs</u> . They learn to interpret, read and draw graphs and charts, and how to use these skills to represent real life data.	<u>Graphs</u> – including linear, quadratic, reciprocal and real-life graphs knowledge of linear and quadratic algebra, as well as coordinate geometry to develop graphical knowledge	Higher Further Trigonometry Foundation Quadratic equations and graphs			