

The Maths faculty have three pathways that guide learners through the curriculum at the most appropriate level to suit their needs.

The Theta and Delta paths work towards completing Maths GCSE at the higher level. They cover very similar content but are introduced at different phases of a student's high school journey, with the Theta content aimed at stretching the most able students. Our Pi pathway works towards covering content required to sit GCSE at foundation level.

All pathways work in spiral format, visiting and revisiting mathematical concepts throughout a student's high school journey. This method allows the faculty to build on content previously learned and to enhance understanding. It also allows for students to consolidate and develop their Mathematical ability.

Time spent at each year is proportional to the quantity of content on the GCSE syllabus. Number plays a large part across all three schemes as does problem solving.

### Curriculum Map for Delta Pathway.

DELTA 6		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Theme or intent	Numerical and Visual Analysis	Algebraic Proficiency and Shapes	Exploring FDP and Patterns in number	Calculating Space	Reasoning	Shape
		<u>Unit 2</u> Number skills Factors and Primes Negatives Powers and Roots	<u>Unit 3 + 7</u> Equations, functions and formulae Using Formulae Expanding and factorising Solving	<u>Unit 4</u> Fractions Four operators Mixed number	<u>Unit 6</u> Decimals Ordering Rounding Four operators	<u>Unit 8</u> Multiplicative reasoning Writing ratio Sharing Ratios Proportional reasoning Unitary Method.	<u>Unit 5 (from year 8)</u> Transformations Congruence and Similarity Enlargements Reflections Rotations Translations.
		<u>Unit 1</u> Analysing and displaying data Graphs and Charts Measure of spread Grouped Data	<u>Unit 5</u> Angles and shapes Parallel Lines Triangles Quadrilaterals Polygons	<u>Unit 10</u> Sequences and graphs The nth term Pattern Sequences Line segments	<u>Unit 9</u> Perimeter, area and volume Compound Shapes 3D solids Surface Area Volume		
Assessments	Half Term 1	Term 1	Half term 2	Term 2	End of Year		

DELTA 6		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	Theme or intent	Calculating Space	Dispersion and Algebraic Tinkering	Constructing	Interpreting Graphs	Understanding risk	Exploring FDP
		<u>Unit 1</u> Factors and powers Prime Factors Laws of Indices	<u>Bonus Unit</u> <u>Measures of spread</u> (averages from grouped data etc.) Mean from group data Quartiles and IQR	<u>Unit 9</u> <u>Scale drawings and measurements</u> Maps and scales Bearings Scales and Ratio	<u>Unit 4</u> <u>Real-life graphs</u> Direct proportion Distance time graphs Rates of change	<u>Unit 8</u> <u>Probability</u> Comparing Mutually exclusive Estimating Experimental Diagrams	<u>Unit 6</u> <u>Fractions, decimals and percentages</u> Recurring decimals Percentage change Repeated Percentage change
		<u>Unit 3</u> <u>2D shapes and 3D solids</u> Plans, elevations Surface Area Volumes Circumference and Area of a circle.	<u>Unit 2</u> <u>Working with powers</u> Simplifying expressions. Substituting and solving.	<u>Unit 7</u> <u>Constructions and loci</u> Constructing Shapes Loci	<u>Unit 10</u> <u>Graphs</u> The gradient Equation of a line Parallel and perpendicular lines.		
<b>Assessments</b>		Half Term 1	Term 1	Half term 2	Term 2	End of Year	

DELTA 6		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9	Theme or intent	Power 2 and beyond	Right Angled triangles and analysing charts	Algebraic Tinkering	Visualising and Reasoning	Compound Measures	Moving onward
		<u>Unit 1</u> Powers and roots Reciprocals Indices Standard Form Surd	<u>Unit 9</u> Trigonometry SOHCAHTOA Graphs	<u>Unit 5</u> Multiplicative reasoning Direct proportion Non-linear proportion Areas and sectors	<u>Unit 10</u> Mathematical reasoning Proof	<u>Unit 8</u> Graphical solutions Simultaneous Equations Graphing inequalities	<u>GCSE - DATA Unit 3.</u> Two way tables Time series Stem and leaf Scatter diagrams Line of best fit Averages
		<u>Unit 2</u> Quadratics Sequences Expanding Factorising	<u>Unit 4</u> Collecting and analysing data Boxplots Cumulative frequency graphs Histograms	<u>Unit 3</u> Inequalities, equations and formulae Inequalities Solving equations Changing the subject Algebraic Fractions	<u>Unit 6</u> Non-linear graphs Quadratics Cubics Reciprocals	<u>Unit 7</u> Accuracy and measures Rates of change Density and pressure Bounds	
Assessments	Half Term 1	Term 1	Half term 2	Term 2	End of Year	Unit 3	

DELTA 6		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Theme or intent	Exact Values and Patterns	Exploring FDP	Spatial Awareness	Visualising and Constructing	Understanding Risk and Reasoning	Advanced Triangles
		<u>Unit 1 Number</u> Zero powers Power 10 Rationalising surds	<u>Unit 4 Fractions, ratio and proportion</u> Problem Solving	<u>Unit 6 Graphs</u> Linear Rates Real life Line segments Non linear	<u>Unit 8 Transformation and constructions</u> All transformations Constructions. Loci Bearings	<u>Unit 10 Probability</u> Combined events Mutually exclusive Experimental Independent Conditional	<u>Unit 12 Similarly and congruence</u> Congruency rules Geometric Proof Similarity Similarity in 3D solids
		<u>Unit 2 Algebra</u> Equations Formula Linear and non linear sequences	<u>Unit 5 Angles and trigonometry</u> <u>Interior and exterior angle problems.</u> <u>Pythagoras Inc.</u> <u>3D</u> <u>Basic Trigonometry</u>	<u>Unit 7 Area and volume</u> Units and accuracy Prisms Circles and sectors Cylinders, spheres, prisms and pyramids	<u>Unit 9 Equations and Inequalities</u> Solving Quadratics Completing the square Simple simultaneous. Linear and non linear simultaneous.	<u>Unit 11 Multiplicative reasoning</u> Growth and decay Compound Measures Ratio and proportion	<u>Unit 13 More trigonometry</u> Graphs Sine rule Cosine rule Area of non right angled triangles Transforming trig functions
<b>Assessments</b>	Units 1 and 2	Units 4 and 5	Units 6 and 7	Units 8 and 9. Year 10 Exam	Units 10 and 11	Units 12 and 13	

DELTA 6		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Year 11	Theme or intent	Interpreting Graphs	Visualising and Manipulating	Complex Reasoning.	Further Maths	Recap, recall, redo	Bon Voyage	
		<u>Unit 14 Further statistics</u> Sampling strategies CF Box plots Histograms	<u>Unit 16 Circle theorems</u> All theorems Radii and Chords	<u>Unit 18 Vectors and geometric proof</u> Vector notation Vector arithmetic Parallel and collinear				
			<u>Unit 17 More algebra</u> Algebraic fractions Further rationalising Functions Proof	<u>Unit 19 Proportion and graphs</u> Direct and indirect proportions Exponential functions Graph transformations				
<b>Assessments</b>	Unit 14 and 15	Unit 16 and 17. Trial 1	Unit 18 and 19	Trial 2	GCSE			

### Curriculum Map for Theta Pathway

THETA 0		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Theme or intent	Numerical and Visual Analysis	Algebraic Proficiency and Shapes	Exploring FDP and Patterns in number	Understanding Risk	Reasoning	Shape
		<u>Unit 2</u> Number skills The four operations Factors and Primes Negatives	<u>Unit 3</u> Expressions, functions and formulae Simplifying Expressions Substituting into formulae	<u>Unit 5</u> Fractions Comparing Fractions Equivalence	<u>Unit 4</u> Decimals and measures Rounding Length and mass Scales and coordinates	<u>Unit 7</u> Ratio and proportion Direct proportion Writing and using ratio Scale and Measure Proportions and fractions.	<u>Unit 10</u> Transformations Congruence Enlargements Reflections Rotations Translations.
		<u>Unit 1</u> Analysing and displaying data Graphs and Charts Measure of spread Grouped Data	<u>Unit 8</u> Lines and angles Measuring and drawing Angles in triangles Quadrilaterals	<u>Unit 9</u> Sequences and graphs Pattern Sequences Line segments Position to-term Graphs	<u>Unit 6</u> Probability Language Calculating probability Experimental probability		
Assessments	Half Term 1	Term 1	Half term 2	Term 2	End of Year		

THETA 0		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	Theme or intent	Calculating Space	Analysing and Solving	Numerical and spatial reasoning	Interpreting Graphs	Fractions	Exploring FDP
		<u>Unit 1</u> Number Factors and Primes Negatives Powers and Root	<u>Unit 3</u> Statistics, graphs and charts Stem and leaf Scatter diagrams Using tables	<u>Unit 6</u> Decimals and ratio Ordering Rounding Four operators ratio/Proportion	<u>Unit 5</u> Real-life graphs; Conversion Graphs Distance time graphs Rates of flow graphs.	<u>Unit 8</u> Calculating with fractions Four operators Mixed number Equivalents Reciprocals	<u>Unit 10</u> Percentages, decimals and fractions Proportions Percentage of amounts
		<u>Unit 2</u> Area and volume Area of quadrilaterals 3D solids Surface Area Measures	<u>Unit 4</u> Expressions and equations Powers Expanding and factorising Solving	<u>Unit 7</u> Lines and angles Quadrilateral Geometric problems. Interior and exterior angles	<u>Unit 9</u> Straight-line graphs Direct proportion Gradients Equation of a straight line.		
Assessments	Half Term 1	Term 1	Half term 2	Term 2	End of Year		

THETA 0		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9	Theme or intent	Algebraic Tinkering	Calculating Space	Reasoning	Spatial representation	Understanding Risk	Moving onward
		<u>Unit 1</u> Indices and standard form Indices Estimates Standard Form	<u>Unit 7</u> Circles, Pythagoras and prisms Circumference and Area of a circle. Pythagoras Prisms and cylinders Errors and bounds	<u>Unit 4</u> Multiplicative reasoning Negative and fractional SF Percentage change Rates of change	<u>Unit 10</u> Comparing shapes Introducing trigonometry	<u>Unit 9</u> Probability Comparing Estimating Experimental Diagrams Independent events	<u>GCSE - DATA Unit 3.</u> Two way tables Time series Stem and leaf Scatter diagrams Line of best fit Averages
		<u>Unit 2</u> Expressions and formulae Substituting Indices and brackets Double brackets	<u>Unit 3</u> Dealing with data Collecting Data Averages	<u>Unit 6</u> Equations, inequalities and proportionality Solving equations and inequalities Simultaneous equations.	<u>Unit 8</u> Sequences and graphs nth term non-linear sequences Rates of change Equation of a line Graphs of quadratics	<u>Unit 5</u> Constructions Using scales Constructing Shapes Loci	
<b>Assessments</b>	Half Term 1	Term 1	Half term 2	Term 2	End of Year	Unit 3	



THETA 0		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Theme or intent	Exact Values and Patterns	Exploring FDP	Spatial Awareness	Visualising and Constructing	Understanding Risk and Reasoning	Advanced Triangles
		<u>Unit 1 Number</u> Zero powers Power 10 Rationalising surds	<u>Unit 4 Fractions, ratio and proportion</u> Problem Solving	<u>Unit 6 Graphs</u> Linear Rates Real life Line segments Non linear	<u>Unit 8 Transformation and constructions</u> All transformations Constructions. Loci Bearings	<u>Unit 10 Probability</u> Combined events Mutually exclusive Experimental Independent Conditional	<u>Unit 12 Similarly and congruence</u> Congruency rules Geometric Proof Similarity Similarity in 3D solids
		<u>Unit 2 Algebra</u> Equations Formula Linear and non linear sequences	<u>Unit 5 Angles and trigonometry</u> Interior and exterior angle problems. Pythagoras Inc. 3D Basic Trigonometry	<u>Unit 7 Area and volume</u> Units and accuracy Prisms Circles and sectors Cylinders, spheres, prisms and pyramids	<u>Unit 9 Equations and Inequalities</u> Solving Quadratics Completing the square Simple simultaneous. Linear and non linear simultaneous.	<u>Unit 11 Multiplicative reasoning</u> Growth and decay Compound Measures Ratio and proportion	<u>Unit 13 More trigonometry</u> Graphs Sine rule Cosine rule Area of non right angled triangles Transforming trig functions
<b>Assessments</b>	Units 1 and 2	Units 4 and 5	Units 6 and 7	Units 8 and 9. Year 10 Exam	Units 10 and 11	Units 12 and 13	

THETA 0		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	Theme or intent	Interpreting Graphs	Visualising and Manipulating	Complex Reasoning.	Recap, recall, redo	Recap, recall, redo	Bon Voyage
		<u>Unit 14 Further statistics</u> Sampling strategies CF Box plots Histograms	<u>Unit 16 Circle theorems</u> All theorems Radii and Chords	<u>Unit 18 Vectors and geometric proof</u> Vector notation Vector arithmetic Parallel and collinear	<u>Revision</u>	<u>Revision</u>	
		<u>Unit 15 Equations and graphs</u> Solving simultaneous Representing inequalities Solving graphically Iteration	<u>Unit 17 More algebra</u> Algebraic fractions Further rationalising Functions Proof	<u>Unit 19 Proportion and graphs</u> Direct and indirect proportions Exponential functions Graph transformations	<u>Revision</u>	<u>Revision</u>	
<b>Assessments</b>	Unit 14 and 15	Unit 16 and 17. Trial 1	Unit 18 and 19	Trial 2	GCSE		

### Curriculum Map for Pi Pathway

PI $\pi$		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Theme or intent	Numerical and Visual Analysis	Algebraic Proficiency and Shapes	Exploring FDP and Patterns in number	Calculating Space	Number	Shape
		<u>Unit 2</u> <u>Calculating</u> The four operators Powers of 10 Negatives	<u>Unit 3</u> <u>Expressions, functions and formulae</u> Using Functions Simplifying expressions	<u>Unit 9</u> <u>Fractions, decimals and percentages</u> Comparing Equivalence Calculating	<u>Unit 6</u> <u>Decimals and measures</u> Estimates The four operations Rounding	<u>Unit 5</u> <u>Factors and multiples</u> Multiples Factors Primes Common factors and multiples	<u>Unit 10:</u> <u>Transformations</u> Reflections Rotations Translations. Congruent shapes
		<u>Unit 1</u> <u>Analysing and displaying data</u> Tables Grouped data Averages	<u>Unit 7</u> <u>Angles and lines</u> Measuring and drawing	<u>Unit 4:</u> <u>Graphs</u> Coordinates	<u>Unit 8</u> <u>Measuring and shapes</u> Symmetry Polygons Perimeter Area		
<b>Assessments</b>	Half Term 1	Term 1	Half term 2	Term 2	End of Year		

PI π		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	Theme or intent	Calculating Space	Interpreting and Analysing	Measuring	Pattern spotting	Understanding Risk	Exploring FDP
		<u>Unit 1</u> Number properties and calculations Negatives Ratios	<u>Unit 3</u> Statistics Interpreting Charts	<u>Unit 5</u> Decimals calculations Ordering Rounding Four operators	<u>Unit 7</u> Number properties Squares and Roots Factors and Multiples Prime factors	<u>Unit 10</u> Probability Language Calculating probability Experimental probability	<u>Unit 9</u> Fractions and percentages Comparing Fractions of amounts Four operations Fractions and Percentages Calculating Percentages.
		<u>Unit 2</u> Shapes and measures in 3D 3D solid properties Surface Area Volume	<u>Unit 4</u> Expressions and equations Simplifying Solving Brackets	<u>Unit 6</u> Angles Measuring and drawing Angles in triangles	<u>Unit 8</u> Sequences Generating Extending Position-to-term nth term		
<b>Assessments</b>		Half Term 1	Term 1	Half term 2	Term 2	End of Year	

PI π		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9	Theme or intent	Pattern spotting	Calculating Space and Analysis	Using formulae	Visualising Measures and Graphs	Calculating risk and Angle spotting	Moving onward
		<u>Unit 1</u> <u>Number calculations</u> Four operations Factors and Primes Negatives Powers and Roots	<u>Unit 5</u> <u>Geometry in 2D and 3D</u> Angles Maps and scales Constructions 3D solids Pythagoras	<u>Unit 4</u> <u>Fractions, decimals and percentages</u> Four operators Recurring decimals Mixed number Equivalents Percentage change	<u>Unit 7</u> <u>Multiplicative reasoning</u> Using ratio Using Proportions Measures and conversions	<u>Unit 9</u> <u>Probability</u> Experiments Sample spaces Tree diagrams	<u>GCSE - DATA Unit 3.</u> Two way tables Representing data Time series Stem and leaf Pie charts Scatter diagrams
		<u>Unit 2</u> <u>Sequences and equations</u> Using and finding the nth term Solving equations	<u>Unit 3</u> <u>Statistics</u> Collecting Data Averages	<u>Unit 8</u> <u>Algebraic and geometric formulae</u> Substitute into formulae Formulae in geometry Compound Shapes Circles	<u>Unit 6</u> <u>Algebraic and real-life graphs</u> Conversion Graphs Distance time graphs Midpoints Equations of lines	<u>Unit 10</u> <u>Polygons and transformations</u> Quadrilaterals Triangles Transformations Congruency	
<b>Assessments</b>	Half Term 1	Term 1	Half term 2	Term 2	End of Year	Unit 3	

PI $\pi$		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Theme or intent	Consolidating	Exploring FDP	Calculating space and measuring spread	Visualising	Movement and Proportion	Right angles triangles and Understanding Risk
		<u>Unit 1 Number</u> Calculations Place value Factors, multiples, primes, squares, cubes	<u>Unit 4 Fractions and percentages</u> Four operations Equivalence Calculating percentages	<u>Unit 6 Angles</u> Angles in parallel lines Angles in triangles. Interior and exterior angles Geometric problems	<u>Unit 8 Perimeter, area and volume</u> Compound Shapes 3D solids Surface Area Volume	<u>Unit 10 Transformations</u> Enlargements Reflections Rotations Translations. Combining	<u>Unit 12 Right-angled triangles</u> Pythagoras' Theorem Trigonometry rules
		<u>Unit 2 Algebra</u> Expressions Substitutions Formulae Expand and factorise	<u>Unit 5 Equations, Inequalities and sequences</u> Solving Introducing inequalities Generating sequences nth term	<u>Unit 7 Averages and range</u> Mean and range Mode and median Grouped data and estimating	<u>Unit 9 Graphs</u> Coordinates Linear Graphs Gradients Equation of a line Real life graphs Travel graphs	<u>Unit 11 Ratio and proportion</u> Using ratio Measures Comparing ratios Proportions and graphs	<u>Unit 13 Probability</u> Calculating Combining events Venn diagrams Tree diagrams
<b>Assessments</b>	Units 1 and 2	Units 4 and 5	Units 6 and 7	Units 8 and 9. Year 10 Exam	Units 10 and 11	Units 12 and 13	

PI π		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	Theme or intent	Reasoning and constructing	Manipulating formulae	Big numbers, small numbers. Big shapes, little shapes.	Swansong	Recap, recall, redo	Bon Voyage
		<u>Unit 14</u> <u>Multiplicative reasoning</u> Percentages Growth and decay Compound measures Direct and indirect proportion	<u>Unit 16</u> <u>Quadratic equations and graphs</u> Double brackets Plotting quadratics Understanding roots	<u>Unit 18</u> <u>Fractions, Indices and Standard Form</u> Laws of indices Standard form Calculating with both	<u>Unit 20 More algebra</u> Non linear graphs Simultaneous equations graphically Simultaneous equations algebraically Rearranging formulae Proof	<u>Revision</u>	

		<u>Unit 15</u> <u>Constructions,</u> <u>loci and</u> <u>bearings</u> 3D drawings Plans and elevations Scale drawings Accurate drawings Constructions Loci Bearings	<u>Unit 17</u> <u>Perimeter, area</u> <u>and volume</u> Circumference of circles Area of circles Sectors Cylinder and spheres.	<u>Unit 19</u> <u>Congruence,</u> <u>similarity and</u> <u>vectors</u> Similarity with enlargements. Congruency rules Vector addition Vector representation	<u>Revision</u>	<u>Revision</u>	
<b>Assessments</b>	Unit 14 and 15	Unit 16 and 17. Trial 1	Unit 18 and 19	Trial 2	GCSE		