

Scheme of Learning – Long Term Planning

Subject: GCSE Mathematics Sets 1ABCD

Key stage: 4

Year	Autumn Term	Spring Term	Summer Term
10	<u>Autumn 1</u> <ul style="list-style-type: none"> • Number 1 (Decimals, Prime factorisation, rounding) • Areas and Volumes • Equations and Functions 	<u>Spring 1</u> <ul style="list-style-type: none"> • Pythagoras and Trigonometry • 3D geometry <p style="text-align: center;">End of Topic Assessment</p> <ul style="list-style-type: none"> • Ratio, Proportion • Compound measures 	<u>Summer 1</u> <ul style="list-style-type: none"> • 3D Trigonometry • Trigonometry for non right-angled triangles • Exact values for trig ratios • Statistics inc Histograms, stratified sampling • Quadratic Equations
	<u>Autumn 2</u> <p style="text-align: center;">End of Topic Assessment</p> <ul style="list-style-type: none"> • Geometry of Polygons • Circle Geometry • Number 2 (Fractions and %) 	<u>Spring 2</u> <ul style="list-style-type: none"> • Transformation Geometry • Congruency • Number 3 (Indices, Surds, Standard Form) • Manipulation of Surds <p style="text-align: center;">End of Topic Assessment</p>	<u>Summer 2</u> <p style="text-align: center;">Year 10 Summer Internal Examinations</p> <ul style="list-style-type: none"> • Similarity (2D and 3D) • Proportion and scale factors • Direct and Inverse proportion intro • Gradient of graphs and applications • Area under graphs and applications
11	<u>Autumn 1</u> <ul style="list-style-type: none"> • Cartesian Equations of straight lines, mid-points, tangents, normals • Probability, Venn diagrams, Tree diagrams and independence • Vectors and geometrical problems. • Error intervals and bounds <p style="text-align: center;">Early Practice Mock Paper (Non Calculator)</p>	<u>Spring 1</u> <ul style="list-style-type: none"> • Algebraic fractions • Non-linear simultaneous equations • Arithmetic and Geometric sequences • Rearranging equations <p style="text-align: center;">Remock: Calculator Paper</p>	<u>Summer 1</u> <p style="text-align: center;">Final Revision and Targeted Improvement whole class intervention work</p>

	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	<ul style="list-style-type: none"> ● Non-linear graphs and roots ● Bi-variate data ● Cumulative frequency ● Statistical comparisons of distributions. <p>Exam Practice paper (Calculator) – within class teaching time.</p> <p>Internal Mock Examinations: (2 Papers) Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours)</p>	<p>Remock: Non Calculator Paper</p> <ul style="list-style-type: none"> ● Formal direct and inverse proportion / variation ● Transformations of graphs (function notation) ● (Dimensional analysis) ● Proof techniques (algebraic, relating to number and geometrical) <p>Remock: Calculator Paper</p>	<p>External Examination: Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours) Paper 3: Calculator (1.5 hours)</p>

Scheme of Learning – Long Term Planning

Subject: GCSE Mathematics Set 2A

Key stage: 4

Year	Autumn Term	Spring Term	Summer Term
10	<u>Autumn 1</u> <ul style="list-style-type: none"> ● Triangles and Polygons ● Fractions ● Area and Perimeter ● Linear Equations ● Volume, Surface Area and Density ● Indices 	<u>Spring 1</u> <ul style="list-style-type: none"> ● Quadratic Graphs <p>End of Topic Assessment</p> <ul style="list-style-type: none"> ● Transformations ● Cumulative Frequency ● Standard Form 	<u>Summer 1</u> <ul style="list-style-type: none"> ● Probability ● Quadratic Expressions and Equations ● Inequalities ● Sine and Cosine for right angled trigonometry
	<u>Autumn 2</u> <p>End of Topic Assessment</p> <ul style="list-style-type: none"> ● Expressions ● Percentages ● Distributions and averages ● Speed, distance, time 	<u>Spring 2</u> <ul style="list-style-type: none"> ● Tangent Function ● Linear equations 2 ● Locus and Constructions <p>End of Topic Assessment</p> <ul style="list-style-type: none"> ● Gradients and applications ● Rearranging Formulae 	<u>Summer 2</u> <p>Year 10 Summer Internal Examinations</p> <ul style="list-style-type: none"> ● Linear graphs and equations, mid-points, parallel and perpendicular lines. ● Cubic Graphs ● Simultaneous equations
11	<u>Autumn 1</u> <ul style="list-style-type: none"> ● Review and Improve Number ● Non calculator techniques ● Problem solving in Number ● Forming and solving Quadratics ● Problem solving in algebra <p>Early Practice Mock Paper (Non Calculator)</p>	<u>Spring 1</u> <ul style="list-style-type: none"> ● Angle proofs ● Congruency ● Vectors ● Sequences and problem solving with equations ● Curved graphs and rates of change ● <p>Remock: Calculator Paper</p>	<u>Summer 1</u> <p>Final Revision and Targeted Improvement whole class intervention work</p>

	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	<ul style="list-style-type: none"> ● Percentages, compound interest, multipliers ● Direct and inverse proportion ● Probability tree diagrams ● Venn diagrams ● Independence <p>Exam Practice paper (Calculator) – within class teaching time.</p> <p>Internal Mock Examinations: (2 Papers) Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours)</p>	<p>Remock: Non Calculator Paper</p> <ul style="list-style-type: none"> ● Error bounds ● Compound measures ● 3D problem solving ● Comparing statistical distributions ● Bi-variate data analysis ● Sampling ● Geometry review <p>Remock: Calculator Paper</p>	<p>External Examination: Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours) Paper 3: Calculator (1.5 hours)</p>

Scheme of Learning – Long Term Planning

Subject: GCSE Mathematics Set 2B

Key stage: 4

Year	Autumn Term	Spring Term	Summer Term
10	<u>Autumn 1</u> <ul style="list-style-type: none"> • Calculations and accuracy • Unitary Method • Real Life Graphs • Fractions • Parallel Lines • Percentages <p>End of Topic Assessment</p>	<u>Spring 1</u> <p>End of Topic Assessment</p> <ul style="list-style-type: none"> • Negative Number • Linear Graphs • Quadratic Graphs • Calculator usage dp/sf • Solving linear equations • Simplifying ratio 	<u>Summer 1</u> <ul style="list-style-type: none"> • Indices and Roots • Transformations and enlargement • Scale factors (inc fractional) • Brackets and equations • Conversion graphs (beyond given axes) • Revision of all Y10 work
	<u>Autumn 2</u> <ul style="list-style-type: none"> • Pythagoras Theorem • Pie Charts • Expressions • 3D representations • Indices • Prime factorisation and its applications 	<u>Spring 2</u> <p>End of Topic Assessment</p> <ul style="list-style-type: none"> • Bi-variate data - correlation • 2D shapes inc circles and quadrilaterals • Inequalities • Arithmetic and non-linear sequences, nth terms • Using formulae, substitution, solving. 	<u>Summer 2</u> <p>Year 10 Summer Internal Examinations</p> <ul style="list-style-type: none"> • Averages, stem and leaf • Frequency trees, frequency polygons • Trial and Improvement • Circle vocabulary • Angles in Polygons • Standard Form
11	<u>Autumn 1</u> <ul style="list-style-type: none"> • <p>Early Practice Mock Paper (Non Calculator)</p>	<u>Spring 1</u> <ul style="list-style-type: none"> • <p>Remock: Calculator Paper</p>	<u>Summer 1</u> <p>Final Revision and Targeted Improvement whole class intervention work</p>

	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	<p>Exam Practice paper (Calculator) – within class teaching time.</p> <p>Internal Mock Examinations: (2 Papers) Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours)</p>	<p>Remock: Non Calculator Paper</p> <ul style="list-style-type: none">• <p>Remock: Calculator Paper</p>	<p>External Examination: Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours) Paper 3: Calculator (1.5 hours)</p>

Scheme of Learning – Long Term Planning

Subject: GCSE Mathematics Set 3		Key stage: 4	
Year	Autumn Term	Spring Term	Summer Term
10	<u>Autumn 1</u> <ul style="list-style-type: none"> ● Symmetry ● Fractions & Decimals ● Reading Scales ● Equations ● Triangles and Quadrilaterals ● Statistics, MMR ● Factors, multiples and primes 	<u>Spring 1</u> <ul style="list-style-type: none"> ● Analysis of grouped data ● Fractions, decimals and percentage <p style="text-align: center;">End of Topic Assessment</p> <ul style="list-style-type: none"> ● Areas of right-angled triangles, rectangles and parallelograms ● Negative numbers ● Metric Units ● Simplifying expressions 	<u>Summer 1</u> <ul style="list-style-type: none"> ● Percentage calculations ● Two-way tables and other representations for data ● Ratio and proportion ● Volume and surface area of Cuboid <ul style="list-style-type: none"> ● Revision for Summer exam
	<u>Autumn 2</u> <p style="text-align: center;">End of Topic Assessment</p> <ul style="list-style-type: none"> ● Formulae and expressions ● 3D representations ● Non calc calculations ● Stem and Leaf diagram 	<u>Spring 2</u> <ul style="list-style-type: none"> ● Real life graphs ● Probability <p style="text-align: center;">End of Topic Assessment</p> <ul style="list-style-type: none"> ● Areas of compound shapes ● Fractions, decimals and Percentages 	<u>Summer 2</u> <p style="text-align: center;">Year 10 Summer Internal Examinations</p> <ul style="list-style-type: none"> ● Scatter graphs, correlation and line of best fit. ● Squares, Cubes, Roots and index notation ● Rounding dp / sf and estimation ● Solving equations ● Non-calc multiplication and division ● Arithmetic sequences and nth term
11	<u>Autumn 1</u> <ul style="list-style-type: none"> ● Metric and Imperial Measures ● Bearings and Scale drawing ● Calculator problem solving ● Pie Charts <p style="text-align: center;">Early Practice Mock Paper (Non Calculator)</p>	<u>Spring 1</u> <ul style="list-style-type: none"> ● Parallel lines and angles ● Proportion ● Circles: circumference and area ● Indices ● Ratio ● Enlargement 	<u>Summer 1</u> <p style="text-align: center;">Final Revision and Targeted Improvement whole class intervention work</p>

		Remock: Calculator Paper	
	<p><u>Autumn 2</u></p> <ul style="list-style-type: none"> • Substitution, expressions and brackets • Distance, time, speed and travel graphs • Linear graphs • Rotation and reflection on co-ordinate axes <p>Exam Practice paper (Calculator) – within class teaching time.</p> <p>Internal Mock Examinations: (2 Papers) Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours)</p>	<p><u>Spring 2</u></p> <p>Remock: Non Calculator Paper</p> <ul style="list-style-type: none"> • Inequalities • Angles in Polygons • Problem solving – interpreting questions • Pythagoras • Expanding brackets. <p>Remock: Calculator Paper</p>	<p><u>Summer 2</u></p> <p>External Examination: Paper 1: Non Calculator (1.5 hours) Paper 2: Calculator (1.5 hours) Paper 3: Calculator (1.5 hours)</p>