	Year 10 - Set 1	Add Maths overlap with GCSE
week beginning	**GCSE Content**	**Add Maths extension to GCSE**
	Number 1: (3 lessons) Non calculator & Calculator methods. BIDMAS. Rounding. Estimating Answers. Value for Money questions. Currency Exchange Questions. *Understand the ≠ symbol (not equal)*.	Algebraic notation and vocabulary AL1, Simplify expressions with algebraic fractions AL2
	Algebra: (2 lessons) Solving equations via algebraic fractions, non linear simultaneous equations	
	Geometry: (2 lessons) Parallel and perpendicular lines	
	Geometry: (2 lessons) Equation of circle and tangent of a circle	Know and use the equation of a circle CG3
	Geometry: (2 lessons) Transformations of graphs	
	Algebra: (2 lessons) Factorising quadratics in the form ax^2+bx+c where $a\neq1$. Forming & Solving quadratic equations	Algebraic long division and the factor theroem AL4
	Algebra: (1 lesson) Solving equations using completing the square	Complete the square of a quadratic polynomial AL5
	Algebra: (1 lesson) Sketching graphs and identifying stationary points using completing the square	
	Geometry: (2 lessons) Solving problems involving advanced trigonometry (sine, cosine, area of triangle)	Know the sine and cosine rules and apply them, PT2
	Algebra: (1 lesson) Proofs	use the ambiguous case for the sine rule PT2
	Year 10 Mock Exam Paper 1	
	Geometry: (2 lessons) Vectors	
	Geometry & Measures 2: (2 lessons) Similar shapes (area and volume)	
	Number: (2 lessons) Changing recurring decimals into fractions. Fractional and negative indices	
	Number: (2 lessons) Problems involving speed distance time and Density mass volume.	
	October Half Term	
	Geometry & Measures 2: (3 lessons) Circle theorems and their proofs.	
	Exam Practise and Problem Solving (NEW GCSE Style Questions: (1 lesson) (Resources New Gcse topic tests available in the shared area)	
	Statistics : (4 lessons) Cumulative frequency, Box Plots, Histograms and estimating mean and median from histograms, Consider outliers when calculating the range of a distribution. Constructing & using Time Series graphs to analyse data.	
	Number: (3 lessons) Percentage increase/decrease, reverse percentages. Simple Interest. Compound Interest & Depreciation. Set up, solve and interpret growth and decay problems.	

	Year 10 Mock Exam Paper 2	
	Number 3: (4 lessons) Upper & Lower Bounds and solving problems involving UB LB. Simplifying surds, rationalising the denominator, solving equations involving surds.	Simplify problems with surds AL2
	Geometry & Measures 3: (3 lessons) Angles of elevation & depression. Bearing involving trigonometry. 3D Pythagoras. Know the exact values of sin, cos and tan at key angles (0, 30, 45, 60, 90 degrees).	Apply Pythagoras and trigonometry to 2 and 3 dimensional problems PT6
	Algebra 3: (3 lessons) Rearranging harder formulae. Inverse and composite functions.	
	Geometry & Measures 3: (1 lesson) Enlargement including negative and fractional scale factor.	
	Probability: (3 lessons) Probability. Tree diagrams (with algebra such as forming and solving equations). Venn Diagrams	Construct and use tree diagrams, Venn diagrams and two way tables EN2
	Exam Practise and Problem Solving (NEW GCSE Style Questions: (1 lesson) (Resources New GCSE topic tests available in the shared area)	
	Algebra 3: (2 lessons) Solving equations using iteration	Solve equations by considering change of sign NM1 Use an iterative method NM2 Understand when these methods may fail NM3
	Christmas Holidays	
	Algebra 3: (2 lessons) Solving quadratic inequalities.	Manipulate Inequalities AL7, Set up and solve linear and quadratic inequalites algerbraically and graphically AL8
	Geometry & Measures 3: (1 lesson) Arcs and sector. Solving problems involving triangles, arcs and sector using trigonometry.	
	Algebra 4: (3 lessons) Solving Simultaneous equations (linear) graphically. Solving Quadratic equations graphically. Solving Simultaneous equations one linear & one quadratic graphically including circle and linear	
	Algebra 3: (4 lessons) Harder graphs trigonometry and exponential graphs. Transformations of these graphs.	Sketch and plot linear, polynomial and exponential functions CG 4
	Geometry & Measures 3: (4 lessons) Constructions and loci problems. Angle and perpendicular bisector (including from a point). Drawing 30, 60 and 45 degrees angle. Drawing isosceles and equilateral triangles.	
	Algebra 5 :(4 lessons) Coordinates and mid points. 3-D coordinates. . Gradients of lines & Y-intercept. Linear graphs. Equation of a line (explicit & implicit forms). Find the equation of a line through two points or through one point with given gradient.	Calculate the distance between two points and the mid point of a line segment CG 1&2
	Ratio, Proportion & Rates of Change 2: (2 lessons) Apply the concepts of instantaneous and average rates of change by looking at the gradients of tangents and chords to a curve. Exam Practise and Problem Solving (NEW GCSE Style Questions: (2 lessons) (Resources New Gcse topic tests available in the shared area)	Use a chord to estimate the gradient of a tangent to a curve NM4
	Half term	
	Geometry & Measures 4: (3 lessons) Congruence and Similarity in 2-D and 3-D shapes.	
	Year 10 Mock Exam Paper 3	
	Number 5: (3 lessons) Surds. Rationalising the denominator.	Use the product rule for counting numbers of outcomes, EN3
	Statistics 2: (1 lesson) Stratified Sampling.	Finding permutations and combinations. Solve probability problems involving these EN 3,4,5
	Ratio, Proportion & Rates of Change 3: (2 lessons) Direct & Inverse Proportion.	

	Geometry & Measures 7: (2 lessons) Reflections. Translations.	
	Ratio, Proportion & Rates of Change 4: (2 lessons) Compound measures (SDT & DMV). Change km/h into m/s and vice versa. Statistics 3: (2 lessons) Histograms.	
	Algebra 4 :(3 lessons) Recognise and use the equation of a circle centred at the origin. Find the equation of a tangent to a circle at a given point, using the fact that it is perpendicular to the radius. Ratio, Proportion & Rates of Change 4: (1 lesson) Calculate compound measures including Pressure in numerical and algebraic contexts.	Understand and apply the Binomial expansion of $(a + b)^n$ EN1
	Easter Holidays	
	Algebra 4: (2 lessons) Graphs of Trigonometric Functions. Sketch y = tan x (in addition to sin x and cos x).	Use the definitions of sinθ, cosθ and tanθ for any angles and their graphs PT1
	Geometry & Measures 7: (2 lessons) Rotations. Enlargements. .	
	Geometry & Measures 4: (2 lessons) Area & perimeter of shapes where the sides are in terms of *x*.	
	Algebra 4: (4 lessons) Transformations of Graphs.. Transformations of Trigonometric Graphs.	
	Paper 1 and 2 (Year 10 BEAL MOCK EXAMS)	
	Geometry & Measures 4: (4 lessons) Plans & Elevations. Nets. Symmetries. Units including conversions between metric and imperial & cm^2 to mm^2 …etc. Area and perimeter of circles. Area and perimeter of compound shapes.	
	Algebra 4: (2 lessons) Graphs of Quadratic functions. Graphs of Cubic and Reciprocal functions. Exponential Graphs.	Know and use the function ka^x and its graph EL1
	May Half term	
	Geometry & Measures 6: (2 lessons) Length of arcs & area of sectors & segments. Algebra 6: (4 lessons) Inequalities and Regions. Use inequality notation to specify error intervals due to rounding. Solve quadratic inequalities.	Illustrate linear inequalities in two variables AL9
	-	Applications in linear programming, express situations in terms of inequalities and solve 2 dimensional maximising and minimising problems using an objective function CG6,7,8
	Geometry & Measures 8: (3 lessons) Volume and Surface area of cuboids & cubes. Volume and Surface area of prisms pyramids, spheres, cones and frustums.	
	Geometry & Measures 9: (3 lessons) Constructions and loci. Bisecting a line. Drawing a perpendicular to a line. Bisecting an angle. Exam Revision	
	Year 10 Beal Mock Exam Paper 3	
	Algebra 4: (4 lessons) Recognise when the use of constant acceleration formulae is appropriate. Kinematics (SUVAT).	Kinematics, use of the constant acceleration formulae CA15
	Summer Holidays	

Week Beginning	**Topic – Year 10 – Set 2**	

	These topics should be recaped, ensure students can do them before moving on.	Number of Lessons	This content should be covered in depth, it may be new for most pupils.	Number of Lessons	Once previous topics are understood, then move on to extension.	Number of Lessons
	FIRST		**SECOND**		**THIRD**	
	Grade 4 Topics		**Grade 5 and 6 Topics**		**Grade 7**	
Winter 1	Prime Factorisation, HCF and LCM	1				
	Add/Sub/Mul/Div Fractions	1	Recurring Decimals to Fractions	1		
	Converting and comparing fractions					
	Write a ratio as a fration	1				
	Laws of Indices	1	Fractional and Negative Indices	1		
			The Product rule for counting (combinations)	1		
	Forming and Solving Equations	1	Simultaneous Equations (Elimination method)	2		
	Expanding and Factorising	2	Expanding and Factorising Quadratics (an^2+bn+c and Difference of 2 squares)	2	Factorise harder Quadratics ($a\neq1$)	2
			Expanding Triple Brackets	1	Using the Quadratic Formula	1
Winter 2	Ratio and Proportion	2			Direct and Inverse Proportion	2
	Substitution into formula and expressions	1	Changing the subject of a formula	1	Rearrange Harder Formulas	2
	Inequalities	2	Inequalities on Graphs	1		
	Compound Interest and Depreciation	1	Reverse Percentages	1		
			Repeated percentage change	1		
			Midpoint of a line segment			
			Gradient of a line			
			Equation of a line	3		
			Parallel and Perpendicular lines	1		
Revision and End of Term Setting Exams						
Spring 1	Angle Problems	1				
	Angles in Parallel Lines	1				
	Angles in Polygons	1	Circle Theorems	3		
	Compound Area	1				
	Volume and Surface area of Cuboids	1	Volume of Spheres and Cones	2		
	Volume of Prisms	1	Volume of a Frustum	1		
	Volume and Surface area of Cylinders	2	Sector Areas and Arc Lenghts	1		
	Sample space Diagrams	1	Probablilty Trees	2		
			Venn Diagrams	2		
Spring 2	Bearings	1				
	Pythagoras Theorems	2	SOHCAHTOA (Trigonometry)	3	The Sine Rule	2
			Exact Trig Values	1	The Cosine Rule	2
					Area of a triangle using Sine Rule	2
					3D Pythagoras	2
	Averages from Frequency Tables		Cumulative Frequency	2		
	(Recap Mean,Mode,Median and Range)	1	Box Plots	1		
Revision and End of Term Exams						
Summer 1			Drawing Quadratic Graphs	1	Harder graphs: Trig/Exponential	1
			Drawing other graphs: Cubic/Reciprocal	1		

			Standard Form	2		
			Compound Measures (SDT & DMV)	3		
	Transformations					
	Reflection					
	Rotation					
	Translation					
	Enlargment	4	Enlargement with Negative Scale Factors	2		
			Similar Shapes (lenghts)	1	Congruent Tirangles	1
			Similar Shapes (area and volume)	1		
			Vectors	2		
Summer 2	Revision and End of Year Setting Exams					
	Beginning of New Content for Years 10 and 11					
	Grade 6 or Below Topics		**Grade 7 Topics**		**Grade 8/9**	
			Surds	3		
			Bounds	2		
			Algebraic Fractions	3		
			Inverse and Composite Functions	2		
			Iteration	1		
			Histograms	3		
			Venn Diagrams ("Given that" questions)	2		

Topic – Year 10 – Set 3

Week Beginning	These topics should be recaped, ensure students can do them before moving on.	Number of Lessons	This content should be covered in depth, it may be new for most pupils.	Number of Lessons	Once previous topics are understood, then move on to extension.	Number of Lessons
	FIRST		**SECOND**		**THIRD**	
	Grade 3 and 4 Topics		**Grade 5**		**Grade 6**	
Winter 1	PRIME DECOMPOSITION					
	HCF AND LCM	1				
	PERCENTAGES, PERCENTAGE CHANGE	1				
	COMPOUND INTEREST AND DEPRECIATION	1	REVERSE PERCENTAGES	1		
			STANDARD FORM	2		
	FORMING AND SOLVING EQUATIONS	1	SOLVING SIMULTANEOUS EQUATIONS (ELIMINATION METHOD)	2		
			SOLVING SIMULTANEOUS EQUATIONS GRAPHICALLY	1		
	INEQUALITIES	2			INEQUALITIES ON GRAPHS	2
	ANGLE PROBLEMS	1				

	ANGLES IN PARALLEL LINE	2				
	ANGLES IN POLYGONS	2				
					CIRCLE THREOREMS	3
Winter 2	EXPANDING AND FACTORISING	2	EXPANDING AND FACOTRISING QUADRATICS	2	EXPANDING TRIPPLE BRACKETS	1
			SOLVING QUADRATICS	2		
			DRAWING QUADRATIC GRAPHS	1		
			DRAWING OTHER GRAPHS: CUBIC/RECIPROCAL	1		
	TYPES OF SEQUENCES					
	GERERATING SEQUENCES	1				
	Nth TERM OF A SEQUENCES	1				
	PYTHAGORAS THEOREM	2	SOHCAHTOA - TRIGONOMETRY	3		
			EXACT TRIG VALUES	1		
Spring 1	**REVISION AND END OF TERM EXAMS**					**3**
	PROBABILITY	1	PROBABILITY TREES	2		
			VENN DIAGRAMS	2		
	AREA AND CIRCUMFERENCE OF CIRCLES	2	SECTOR AREA AND ARC LENGTH	2		
	AREA OF COMPOUND SHAPES	1				
	FUNCTIONAL MATHS QUESTIONS	1				
	SURFACE AREA	1				
	VOLUME OF PRISMS	1				
	CYLINDERS (VOLUME AND SURFACE AREA)	2	SPHERES AND CONES	2		
			SPEED AND DENSITY	3		
Spring 2	TRANSFORMATION					
	REFLECTION					
	ROTATION					
	TRANSLATION					
	ENLARGEMENT	4			ENLARGING WITH NEGATIVE SCALE FACOTRS	2
			SIMILAR SHAPES (LENGTH)	2	SIMILAR SHAPES (AREA AND VOLUME)	2
	SUBSTITUTION	1				
			CHANGING THE SUBJECT OF A FORMULA	2		
	RATIO AND PROPORTION	2	DIRECT AND INVERSE PROPORTION	3		
			VECTORS	3		
	REVISION AND END OF TERM EXAMS					**3**
Summer 1	INDICES	1			FRACTIONAL AND NEGATIVE INDICES	2
	MIDPOINT OF A LINE					
	GRADIENT OF A LINE					
	EQUATION OF A LINE	2			PARALLEL AND PERPENDICULAR LINES	2
	LOCI AND CONSTRUCTION	2				
	BEARINGS	2				
	AVERAGES FROM A FREQUENCY TABLE	2			CUMULATIVE FREQUENCY	2
	SCATTER GRAPHS	1			BOX PLOTS	1
Summer 2	**REVISION AND END OF TERM EXAMS**					**3**
	Once exams are complete do the GAP anylsis and then go through the topics which your class has struggled with.					**3**

	Ensure all the extention topics which were not tested have been understood and give mini assessments on them.					
			Grade 6		**Grade 7**	
			RECURRING DECIMALS INTO FRATIONS	2		
			REPEATED PERCENTAGE CHANGE	1		
					SURDS	3
					BOUNDS	2
					FACTORISING HARDER QUADRATICS	2
					QUADRATIC FORMULA	1
	Beginning of New Content for Year 11					

Topic – Year 10 – Set 4

Week Beginning	**These topics should be recaped, ensure students can do them before moving on.**	Number of Lessons	**This content should be covered in depth, it may be new for most pupils.**	Number of Lessons	**Once previous topics are understood, then move on to extension.**	Number of Lessons
	FIRST		**SECOND**		**THIRD**	
	Grade 2 Topics		**Grade 3 Topics**		**Grade 4 Topics**	
Winter 1	ROUNDING (Decimals and Significant figures)	1				
	ESTIMATING	1				
	FACTORS AND MULTIPLES	1			PRIME DECOMPOSITION	1
					HCF AND LCM	2
	FRACTIONS OF AN AMOUNT	1	FRACTIONS (add/sub/mul/div)	3		
	FRACTIONS,DECIMALS AND PERCENTAGES	1				
			PERCENTAGES (INCREASE AND DECREASE)	2		
			Multiplier method		COMPOUND INTEREST AND DEPRECIATION	1
			PERCENTAGES, PERCENTAGE CHANGE	1		
	SIMPLIFYING EXPRESSIONS	1	SOLVING EQUATIONS	1		
			SOLVING EQUATIONS WITH UNKNOWNS ON BOTH SIDES	2	FORMING AND SOLVING EQUATIONS	2
					INEQUALITIES	2
Winter 2			RATIO	1		
	NEGATIVE NUMBERS	1	WRITING AND SIMPLIFYING RATIO	1		
			PROPORTION	1		
	POWERS AND ROOTS	1			EXPANDING AND FACTORISING	3
	AREA (Rectangles, Triangles, Trapezium, Parallelogram)	3				

	PERIMETER	1				
					TYPES OF SEQUENCES	2
					GERERATING SEQUENCES	
					Nth TERM OF A SEQUENCES	2
Spring 1	**REVISION AND END OF TERM EXAMS**					**3**
			EXCHANGE RATES	1		
			BEST BUY QUESTIONS	1		
					PYTHAGORAS THEOREM	**3**
			PROBABILITY	2		
	AVERAGES (Mean,Mode,Median and Range)	2				
			AREA AND CIRCUMFERENCE OF CIRCLES	2		
			AREA OF COMPOUND SHAPES	2		
					FUNCTIONAL MATHS QUESTIONS	1
					SURFACE AREA	1
					VOLUME OF PRISMS	1
					CYLINDERS (VOLUME AND SURFACE AREA)	2
Spring 2					RATIO AND PROPORTION	2
					INDICES	2
					LOCI AND CONSTRUCTION	3
					BEARINGS	3
					AVERAGES FROM A FREQUENCY TABLE	3
					SCATTER GRAPHS	2
	Grade 4 Topics		**Grade 5 Topics**			
	ANGLES (Straight line, at a point, at a point, in a triangle)	3	ANGLE PROBLEMS	2		
			ANGLES IN PARALLEL LINE	2		
			ANGLES IN POLYGONS	3		
	REVISION AND END OF TERM EXAMS					**3**
Summer 1	**Grade 4 Topics**		**Grade 5 Topics**			
	TRANSFORMATION	8				
	REFLECTION					
	ROTATION					
	TRANSLATION					
	ENLARGEMENT					
			SPEED AND DENSITY	3		
	PYTHAGORAS (Worded Problems)	2	TRIGONOMETRY (SOHCAHTOA)	3		
	BEARINGS (Calculating - Parallel lines)	2	TRIGONOMETRY (Worded problems, bearings)	3		
	REVISION AND END OF TERM EXAMS					**3**
	Once exams are complete do the GAP anylsis and then go through the topics which your class has struggled with.					**3**
	Ensure all the extention topics which were not tested have been understood and give mini assessments on them.					**3**
Summer 2	DRAWING STRAIGHT LINE GRAPHS	1	GRADIENT OF LINE	1		
			EQUATION OF A LINE	2		

			EXPANDING AND FACOTRISING QUADRATICS	2		
			SOLVING QUADRATICS	2		
			SIMULTANEOUS EQUATIONS	3		
			SIMILAR SHAPES (LENGTH)	2		
			PROBABILITY TREES	2		
			VENN DIAGRAMS	2		
			SECTOR AREA AND ARC LENGTH	2		
	Beginning of New Content for Year 11					

Topic – Year 10 – Set 5

Week Beginning	**These topics should be recaped, ensure students can do them before moving on.**	Number of Lessons	**This content should be covered in depth, it may be new for most pupils.**	Number of Lessons	**Once previous topics are understood, then move on to extension.**	Number of Lessons
	FIRST		**SECOND**		**THIRD**	
	Grade 2 Topics		**Grade 3 Topics**		**Grade 4 Topics**	
Winter 1	ROUNDING (Decimals and Significant figures)	2				
	ESTIMATING	1				
	FACTORS AND MULTIPLES	1			PRIME DECOMPOSITION	1
					HCF AND LCM	2
	FRACTIONS OF AN AMOUNT	1	FRACTIONS (add/sub/mul/div)	3		
	FRACTIONS,DECIMALS AND PERCENTAGES	1				
			PERCENTAGES (INCREASE AND DECREASE)	2		
			Multiplier method		COMPOUND INTEREST AND DEPRECIATION	1
			PERCENTAGES, PERCENTAGE CHANGE	1		
	SIMPLIFYING EXPRESSIONS	2	SOLVING EQUATIONS	2		
			SOLVING EQUATIONS WITH UNKNOWNS ON BOTH SIDES	2		
Winter 2			RATIO	2		
	NEGATIVE NUMBERS	1	WRITING AND SIMPLIFYING RATIO	1		
			PROPORTION	2		
	POWERS AND ROOTS	1			EXPANDING AND FACTORISING	3
	AREA (Rectangles, Triangles, Trapezium, Parallelogram)	3	AREA AND CIRCUMFERENCE OF CIRCLES	2		
	PERIMETER	1	AREA OF COMPOUND SHAPES	2		
Spring 1	**REVISION AND END OF TERM EXAMS**					**3**
			EXCHANGE RATES	1		
			BEST BUY QUESTIONS	1		
					PYTHAGORAS THEOREM	**3**
			PROBABILITY	2		

	AVERAGES (Mean,Mode,Median and Range)	2			TYPES OF SEQUENCES	2
					GERERATING SEQUENCES	1
					Nth TERM OF A SEQUENCES	2
					FUNCTIONAL MATHS QUESTIONS	2
					SURFACE AREA	1
					VOLUME OF PRISMS	1
					CYLINDERS (VOLUME AND SURFACE AREA)	2
Spring 2					RATIO AND PROPORTION	2
					INDICES	2
					LOCI AND CONSTRUCTION	3
					BEARINGS	3
					AVERAGES FROM A FREQUENCY TABLE	3
					SCATTER GRAPHS	2
	REVISION AND END OF TERM EXAMS					**3**
Summer 1	**Grade 4 Topics**		**Grade 5 Topics**			
			ANGLE PROBLEMS	3		
			ANGLES IN PARALLEL LINE	3		
			ANGLES IN POLYGONS	3		
			SPEED AND DENSITY	3		
	PYTHAGORAS (Worded Problems)	2				
	BEARINGS (Calculating - Parallel lines)	2				
	REVISION AND END OF TERM EXAMS					**3**
	Once exams are complete do the GAP analysis and then go through the topics which your class has struggled with.					**3**
	Ensure all the extention topics which were not tested have been understood and give mini assessments on them.					**3**
Summer 2	DRAWING STRAIGHT LINE GRAPHS	2	GRADIENT OF LINE	1		
			EQUATION OF A LINE	2		
	TRANSFORMATION					
	REFLECTION					
	ROTATION					
	TRANSLATION					
	ENLARGEMENT	8				
			TRIGONOMETRY (SOHCAHTOA)	3		
	Beginning of New Content for Year 11					