	Week	Unit
Year 12 Start Here		
Year 12	1,2	12: Differentiation Lesson 1. Differentiation x^n, quadratics 12.3 + 12.4 Lesson 2. Differentiating polynomials 12.5 Lesson 3. Increasing and decreasing functions 12.6
	3,4	Lesson 4. Gradients tangents normals 12.7 Lesson 5. Second order, Stationary points 12.8 + 12.9 Lesson 6. Sketching gradient functions 12.10 Lesson 7. Modelling with differentiation 12.11 Lesson 8. Modelling with differentiation 12.11
	5,6	Lesson 9. Diff from first principles 12.1 + 12.2 Lesson 10. Diff from first principles 12.1 + 12.2 12: CBT&FB(2) 2: Quadratics Lesson 1. Solving quadratics, completing the square 2.1 + 2.2
	7,8	Lesson 2. Functions 2.3 Lesson 3. Quadratic graphs 2.4 Lesson 4. Discriminant 2.5 Lesson 5. Modelling with quadratics 2.6 3: Equations and Inequalities Lesson 1. Linear, quadratic simultaneous equations 3.1 + 3.2
		OCTOBER HALF TERM
	9,10	Lesson 2. Graphs of simultaneous equation 3.3 Lesson 3. Linear, quadratic inequalities 3.4 + 3.5 Lesson 4. Inequality on graphs 3.6 Lesson 5. Regions 3.7 4: Graphs and transformations Lesson 1. Cubic, Quartic graphs 4.1 + 4.2

	11,12	Lesson 2. Reciprocal graphs, points of intersection 4.3 + 4.4 Lesson 3. Translating, stretching graphs 4.5 + 4.6 Lesson 4. Transforming functions 4.7 3+4: CBT&FB (2)
	13,14	5: Straight line graphs Lesson 1 y=mx+c, equation of straight line 5.1 + 5.2 Lesson 2 Parallel and perpendicular lines 5.3 Lesson 3 Length and Area 5.4 Lesson 4 Modelling with straight lines 5.5 13: Integration Lesson 1. Integrating x^n 13.1
	15	Lesson 2. Indefinite integrals 13.2
		END OF AUTUMN TERM
	16,17	Lesson 3. Finding functions 13.3 Lesson 4. Definite integrals 13.4 Lesson 5. Areas under curve 13.5 Lesson 6. Areas under the x-axis 13.6
	18,19	Lesson 7. Areas between curves and lines 13.7 13: CBT&FB (2) 6: Circles Lesson 1. Mid point and perpendicular bisectors 6.1 Lesson 2. Equation of a circle 6.2
	20,21	Lesson 3. Intersections of straight lines and circles 6.3 Lesson 4. Use tangent and chord properties 6.4 Lesson 5. Circles and triangles 6.5 9: Trigonometric ratios Lesson 1. Cosine rule, sine rule, area of triangle 9.1 + 9.2 + 9.3 Lesson 2. Solving triangle problems 9.4
		FEBRUARY HALF TERM
		Lesson 3. Graphs of sine, cosine and tangent, 9.5 Lesson 4. Transforming trig graphs 9.6

	22,23	10: Trigonometric identities and equations Lesson 1. Lesson 2. Lesson 3.
	24,25	Lesson 4. Lesson 5. Lesson 6. 10: CBT&FB (2)
	26	14: Exponentials and logarithms Lesson 1. Exponential functions Lesson 2. y=e^x
		END OF SPRING TERM
	27,28	Lesson 3. Exponential modelling Lesson 4. Logarithms Lesson 5. Laws of logarithms Lesson 6. Solving equations using logarithms Lesson 7. Working with natual logarithms
	29,30	Lesson 8. Logarithms and non-linear data 11: Vectors Lesson 1.vectors Lesson 2.Representing vectors Lesson 3. Magnitude and direction Lesson 4. Position vectors
	31,32	Lesson 5. Solving geometric problems Lesson 6. Modelling with vectors Revision (1) Assessment (1) Feedback (1)
		MAY HALF TERM
		7: Algebraic methods Lesson 1. Algebraic fractions

		Lesson 2. Dividing polynomials
		Lesson 3. Factor theorem
		Lesson 4. Proof
	33,34	Lesson 5. Proof
		Year 2
		1: Algebraic methods
		Lesson 1. Proof by contradiction
		Lesson 2. continued
		Lesson 3. Algebraic fractions
		Lesson 4. Partial fractions
	35,36	Lesson 5. Repeated factors
		Lesson 6. Algebraic division
	37,38	CBT+FB (2)
	39,40	Activities week and end of term
		End of Year 12
		2: Functions and graphs
		Lesson 1. Modulus function
Year 13	1,2	Lesson 2. Functions and mappings
		Lesson 3. Composite functions
		Lesson 4. Inverse functions
		Lesson 5. modulus as reflections in x and y
		Lesson 6. Combining transformations
	3,4	Lesson 7. Solving modulus problems
		3: Sequences and series
		Lesson 1. 3.1+3.3 Arithmetic and geometric sequences
		Lesson 2. Arithmetic series
		Lesson 3. Geometric series
		Lesson 4. Sum to infinity
	5,6	Lesson 5. Sigma notation
		Lesson 6. Recurrence relations
		Lesson 7. Modellin gwith series

		CBT+FB (2)
		8: Parametric equations
	7,8	Lesson 1. Parametric equations
		OCTOBER HALF TERM
		Lesson 2. Using trig identities
		Lesson 3. 8.3+8.4 Curve sketching & points of intersection
		Lesson 4. Modelling with parametric equations
		9: Differentiation
		Lesson 1. Differentiating sinx and cos x
	9,10	Lesson 2. exp and logs
		Lesson 3. The chain rule
		Lesson 4. The product rule
		Lesson 5. The quotient rule
		Lesson 6. Differentiating trig functions
	11,12	Lesson 7. Parametric differentiation
		Lesson 8. Implicit differentiation
		Lesson 9. Using second derivatives
		Lesson 10. Rates of change
		11: Integration
		Lesson 1. Standard functions
	13,14	Lesson 2. f(ax+b)
		Lesson 3. Using trig identities
	15	Lesson 4. Reverse chain rule
		END OF AUTUMN TERM
	16,17	Assessment
		Lesson 5. Substitution
		Lesson 6. By parts
		Lesson 7. Partial fractions
		Lesson 8.Finding areas
	18,19	Lesson 9. Trapezium rule
		Lesson 10. Solving differential equations

	20,21	Lesson 11. Modelling with differential equations 10: Numerical methods Lesson 1. 10.1+1.02 Locating roots + Iteration Lesson 2. Newton-Raphson method Lesson 3. Applications to modelling
		FEBRUARY HALF TERM
	22,23	12: Vectors Lesson 1: 12.1+12.2 3D coordinates, Vectors in 3D Lesono 2. Solving geometric problems Lesson 3. Application to mechanics CBT + FB for integration (2)
	24,25	Revision and Past Papers
	26	Revision and Past Papers
		END OF SPRING TERM
	27,28	Assessment
	29,30	Revision and Past Papers
		YEAR 13 STUDY LEAVE BEGINS