

Scope and Sequence Document for: IGCSE Mathematics

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Tutor qualifications:	B.Sc. (Hons) Durham PGCE, East Anglia	IGCSE/A level Exam board & Specification No:	Mathematics A Extended tier CAIE 0580
Resources required:	Cambridge IGCSE Mathematics Core and Extended 4th Edition, (2018), Ric Pimentel and Terry Wall, ISBN: 9781510421684, Hodder		

Module No.	NSW week No.	Week beginning Monday the:	Contents of study
1	1	07/09/20	Types of number, roots, factors & multiples and directed number (chapter 1)
	2	14/09/20	Expanding brackets, factorising, substitution, rearranging formula, positive and negative indices (chapters 11.1 – 11.6)
	3	21/09/20	Approximation, rounding, estimating and bounds (chapter 2.1 – 2.5)
	4	28/09/20	Coordinates, gradient of a straight line, equation of a straight line and parallel lines (chapter 21.1 – 21.11)
	5	05/10/20	Sets and Venn diagrams (chapter 10) Practice test 1
2	6	12/10/20	Names and properties of polygons, constructions and similar shapes (chapters 22 and 23.1)
	7	19/10/20	Ordering numbers, order of operations, fractions and decimals (chapters 3 and 4.1 – 4.10)
	8	26/10/20	Half Term
2 (Cont.)	9	02/11/20	Calculating percentages, percentage increase and decrease, currency conversions, earnings and profit and loss (chapters 5 and 8)
	10	09/11/20	Constructing equations, solving linear equations and solving simultaneous equations algebraically and graphically (chapters 13.1 – 13.6 and 21.12)
	11	16/11/20	Angles at a point, on a line, in a triangle, in polygons and in a circle (chapter 25.1 – 25.6)
	12	23/11/20	Arithmetic sequences and quadratic sequences, conversion graphs, distance graphs and travel graphs (chapters 15.1 – 15.3 and 17.1 – 17.4)
	13	30/11/20	Averages and range of data, charts, surveys, scatter diagrams and histograms (chapters 35.1 – 35.2 and 36.1 – 36.4)

	14	07/12/20	Quadratic graphs and using graphs to solve equations and reciprocal graphs (chapters 18.1 – 18.3 and 18.5) Practice test 2
3	15	14/12/20	Proportion, ratio, compound measures and time (chapters 6.1 – 6.4, 6.7 and 9)
	16	21/12/20	Christmas Holiday
	17	28/12/20	Christmas Holiday
	18	04/01/21	Christmas Holiday
3 (Cont.)	19	11/01/21	Positive and negative indices, zero index, exponential equations, standard form (chapters 7.1 – 7.6 and 12.1 – 12.2)
	20	18/01/21	Metric units and area and volume conversions (chapter 26)
	21	25/01/21	Probability, Venn diagrams and relative frequency (chapter 33)
	22	01/02/21	Perimeter, area, volume and surface area (chapter 27) Practice test 3
	23	08/02/21	Second week for above topics
	24	15/02/21	Half Term
4	25	22/02/21	Combined events, tree diagrams and conditional probability (chapter 34)
	26	01/03/21	Vectors, translations, addition and subtraction of vectors and multiplying a vector by a scalar (chapter 31.1 – 31.3)
	27	08/03/21	Bearings, trigonometry and Pythagoras' theorem (chapters 28 and 29.1 – 29.5)
	28	15/03/21	Reflections, rotations, translations and enlargement (chapter 32.1 – 32.8)
Revision & exams	29	22/03/21	Revision - number Practice test 4
	30	29/03/21	Easter Holiday
	31	05/04/21	Easter Holiday
	32	12/04/21	Easter Holiday
Revision & Exams	33	19/04/21	Revision – algebra and graphs
	34	26/04/21	Revision – geometry and trigonometry
	35	03/05/21	Revision – vectors, probability and statistics

	36	10/05/21	Year 10 exam paper 1
	37	17/05/21	Year 10 exam paper 2
5	38	24/05/21	Calculating with upper and lower bounds and recurring decimals (chapters 2.6 – 2.7 and 4.11)
	39	31/05/21	Half Term
5 (Cont.)	40	07/06/21	Expanding double brackets, harder factorising, difference of two squares, factorising quadratic expressions, rearranging more complex formulae and algebraic fractions (chapter 11.7 – 11.18)
	41	14/06/21	Increase and decrease by a given ratio and fractional indices (chapter 6.5 – 6.6 and 7.7 – 7.8)
	42	21/06/21	Magnitude of a vector, position vectors, vector geometry, negative enlargement and combinations of transformations (chapter 31.4 – 31.7 and 32.9 – 32.10)
	43	28/06/21	Mean of grouped data, further histograms, cumulative frequency, quartiles, interquartile range and box-and-whisker plots (chapters 35.3, 36.5 and 37)
NSW Summer holiday period – 5 July – 3 September 2021			
6 6 (Cont.)	1	06/09/21	Angles of elevation and depression, trigonometric curves and solving trigonometric equations (chapter 29.6 – 29.9)
	2	13/09/21	Sine rule, cosine rule, area of a triangle, trigonometry in 3-D and the angle between a line and a plane (chapter 30)
	3	20/09/21	Fractional indices, solving quadratic equations by factorising, the quadratic formula, simultaneous equations with one linear and one quadratic equation and solving linear inequalities (chapters 12.3 and 13.7 – 13.13)
	4	27/09/21	Graphing inequalities and linear programming (chapter 14)
	5	04/10/21	Exponential sequences, combinations of sequences, calculating the length of a line segment, the midpoint of a line segment, the equation of a line through two points and perpendicular lines (chapters 15.3 – 15.5 and 21.13 - 21.15)
	6	11/10/21	Similar shapes, area and volume of similar shapes, congruent shapes and congruent triangles (chapter 23.2 – 23.6)
	7	18/10/21	Revision – exam practice papers
	8	25/10/21	Half Term
7	9	01/11/21	Direct proportion and inverse proportion (chapter 16)
	10	08/11/21	Symmetry and circle properties (chapter 24)
	11	15/11/21	Angle properties of circles (chapter 25.7 – 25.10)
	12	22/11/21	Speed-time graphs, area under a speed-time graph and non-linear travel graphs (chapter 17.5 – 17.8)

	13	29/11/21	Quadratic graphs, types of graphs, exponential functions, gradients of curves, solving equations graphically and sketching functions (chapter 18.4, 18.6 – 18.11)
	14	06/12/21	Functions, inverse functions and composite functions (chapter 20)
	15	13/12/21	Revision – exam practice papers
	16	20/12/21	Christmas Holiday
	17	27/12/21	Christmas Holiday
	18	03/01/22	Christmas Holiday
7 (Cont.)	19	10/01/22	The gradient function, differentiation, gradient of a curve at a point and equation of a curve at a point (chapter 19)
Revision & exams	20	17/01/22	Catch-up and personal revision
	21	24/01/22	Catch-up and personal revision
	22	31/01/22	Year 11 internal exam paper 1
	23	07/02/22	Year 11 internal exam paper 2
Revision	24	14/02/22	Revision of number topics (chapters 1 – 10)
	25	21/02/22	Half Term
Revision	26	28/02/22	Revision of algebra and graph topics (chapters 11 – 21)
	27	07/03/22	Revision of geometry and mensuration topics (chapters 22 – 27)
	28	14/03/22	Revision of trigonometry, vectors and transformations topics (chapters 28 – 32)
	29	21/03/22	Revision of probability and statistics topics (chapters 33 – 37)
	30	28/03/22	Personal revision
	31	04/04/22	Easter Holiday
	32	11/04/22	Easter Holiday
	33	18/04/22	Easter Holiday
	34	25/04/22	

	35	02/05/22	
	36	09/05/22	
	37	16/05/22	
	38	23/05/22	
	39	30/05/22	Half Term
	40	06/06/22	
	41	13/06/22	
	42	20/06/22	
	43	27/06/22	