Subject Long Term Plan Year 10

Chichester Free School
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W/C	6th September	10th September	17th September	24th September		1st October	8th October	15th October		31st October	5th November	12th November
	Revise and Improve	**Revise and Improve**	**Revise and Improve**	**Revise and Improve**		**Algebra 3**	**Algebra 3**	**Algebra 3**		**Algebra 3**	**Revision and assessment week**	**Algebra 3**
	4 operations Negative numbers Fractions, decimals and percentages Algebra 1 and 2 Ratio and Proportion					Coordinates in all 4 quadrants Recognise, sketch and produce graphs of: linear functions of 1 variable Quadratic functions of one variable Understand and use standard mathematical formulae Rearrange formulae to change the subject including where the subject appears more than once.			HALF TERM	Interpret mathematical relationships both algebraically and graphically e.g. direct and indirect proportion and real-life graphs		Reduce a given linear equation in 2 variables to the standard for y=mX + c Calculate and interpret gradients and intercepts of such equations numerically, graphically and algebraically
W/C	19th November	26th November	3th December	10th December	CHRISTMAS	7th January	14th January	21st January	28th January	4th February	11th February	HALF TERM
	Algebra 3	**Algebra 3**	**Algebra 3**	**Problem Solving**		**Geometry: Transformations**	**Geometry: Transformations**	**Geometry: Transformations**	**Geometry – Angles and constructions**	**Geometry – Angles and constructions**	**Geometry – Angles and constructions**	
	Use linear and quadratic graphs to estimate values of y for given values of x and vice versa and to fins approximate solutions of simultaneous linear equations Find approximate solutions to contextual problems form given graphs of a variety of functions including linear, exponential and reciprocal. Recognise and generate geometric sequences			**Investigations from problem solving folders**		**Identify properties of and describe the results of translations, rotations and reflections applied to given figures**			Draw and measure line segments and angles in geometric figures, including interpreting scale diagrams and use of bearings and loci. Use scale factors, scale drawings and maps Identify and construct congruent triangles and construct similar shapes by enlargement s, with and without coordinate grids Derive and use standard ruler and compass constructions - perpendicular bisectors or a line segment, constructing a perpendicular to a given line from. At a given point, bisecting a given angle. Recognise and use the perpendicular distance from a point to a line as the shortest distance to the line		
W/C	25th February	4th March	11th March	18th March		25th March	1st April	EASTER	24th April	29th April	6th May	13th May

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	Revision and assessment week	**Statistics**	**Statistics**	**Probability**	**Probability**	**Probability**		**Number – standard form**	**Number – standard form**	**Number – standard form**	**Number – standard form**
		Revise cumulative frequency Draw and interpret box plots Use and interpret scatter graphs of bivariate data and recognise correlation. For continuous data in a table, find an estimate pf the mean, modal class interval and class interval containing the mean		Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0 to 1 probability scale, using probablility and frequency trees Understand that the probabilities of all possible outcomes sum to 1 Enumerate sets and unions of sets systematically, using tables, grids and Venn diagrams Generate theorical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities.				Interpret and compare numbers in standard form A x 10 ^{n} 1 ≤ A < 10, where n is a positive or negative integer or 0. Add and subtract 2 numbers in standard form Understand what a surd is and simplify basic surds Evaluate simple fractional and negative indices in the form: a^{-n} , $a\frac{1}{n}$, $a^{-\frac{1}{n}}$ where n is an integer		
W/C	20th May	**HALF TERM**	3rd June	10h June	17th June	24th June	1st July	8th July			
	Geometry - Pythagoras and Trigonometry		**Geometry - Pythagoras and Trigonometry**	**Exam week**	**Geometry - Pythagoras and Trigonometry**	**Geometry - Pythagoras and Trigonometry**	**Enrichment week**	**Geometry - Pythagoras and Trigonometry**			
	Apply angle facts, triangle congruence, similarity and properties of quadrilaterals to derive results about angles and sides, including Pythagoras theorem and use known results to obtain simple proofs		Use Pythagoras and trigonometric rations in similar triangles to solve problems using right angle triangles.		Know the formulae for Pythagoras theorem, $a^2 + b^2 = c^2$ and the trigonometric ratios Apply them to find angles and lengths in right angle triangles and where possible, general triangles in 2 and 3d figures.			Know the exact values of sinΘ and cos Θ for Θ = 0˚, 30˚,45˚,60˚,90˚/ Know the exact value for tan Θ for Θ= 0˚,30˚,45˚, 60˚		