Mathematics HIGHER Long Term Plan Year 10 2019-20

Chichester Free School
Nurture • Challenge • Inspire

Temperance Term

W/C	2nd September	9th September	16th September	23rd September	30th September	7th October	14th October	21st October
Topic	**Angles Scale diagrams and bearings**	**Basic Number, Factors and multiples**		**Basic Algebra**		**Basic fractions & Decimals**		**Rounding**
	Angles at a point, on a line, on parallel lines, vertically opposite angles	Negative numbers, approximation, LCM, HCF, primes, product of prime factors		Notation, simplifying expressions Expand & Factorise Linear & Quadratic Expressions		Four operations, Ordering, Fractions and decimals. conversion to fractions, decimals & percentages		Decimal places, significant figures
Challenge	Scale factors, 3 figure bearings Angles in Polygons	Prime factor decomposition Venn Diagrams Error Bounds		Solving the square Solve Quadratics Graphically Solve Equations double brackets Use quadratic formula		Add & subtract Multiply & divide fractions Improper Fractions Algebraic Fractions		Error bounds. Recurring decimals
Assessment								

W/C		4th November	11th November	18th November	25th November	2nd December	9th December	
Topic		**Coordinates and linear graphs**	**Assessment**	**Sequences**	**Collecting and Representing Data**		Investigations	
	HALF TERM	Coordinates in 4 quadrants, y=mx+c Mid Point of a line Find line length (Pythagoras)	Revision, diagnostic test, target setting	nth term for linear sequences, special sequences	Questionnaire Bar charts, pie charts, pictograms, vertical line charts		Investigations & Problem Solving	CHRISTMAS
Challenge		Gradient & intercept from a line Mid points mathematically Perpendicular equation of a line.		Position to term rule Term to term rule Nth Term for Quadratic sequences	Interpret & Construct pie charts Cumulative frequency. Box plots			
Assessment			**GCSE Mock Style**					

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Justice Term

W/C	6th January	13th January	20st January	27th January	3rd February	10th February	
Topic	**Basic Percentages**		**Perimeter and area**		**Circles**	**Real life graphs**	
	One quantity as a % of another, FDP conversions Percentage Increase, Decrease Simple & Compound Interest.		Area and perimeter of 2D shapes & composite shapes, properties of 3D shapes, Trigonometry Pythagoras' Theorem		Definitions, circumference area, arc length, sector area	Calculating and interpreting, speed/distance/ time	HALF TERM
Challenge	Algebraic percentage increase of volume/area.		Surface area of 3D shapes, cones, spheres cylinders 3D Pythagoras' Theorem Sine & Cosine rules		Calculate circumference & area of whole and sector circles	SDT real life situations	
Assessment							
W/C	24th February	2nd March	9th March	16th March	23rd March	30th March	
Topic	**Ratio and proportion**	**Properties of polygons**	Equations	Indices	Stand form	Transformations	
	Division in a ratio, Proportion in cooking	Special quadrilaterals, angle sum of polygons	Substitute into formulae, solve linear equations Factorise & expand brackets	Index notation, Index Laws	Converting to and from Standard Index Form	Translation Rotation	EASTER
Challenge	one quantity as a fraction of another, in context Constant of Proportionality Direct and inverse proportion	Interior & exterior angles in polygons	Expand & Factorise Linear & Quadratic expressions	surds Rational & irrationalnumbers Fractional & negative indices	Calculations with and without a calculator (add, subtract, multiply & divide)	Rotational symmetry Vector coordinates, Vectors Colinear proof first go	
Assessment							

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Courage Term

W/C	20th April	27th April	4th May	11th May	18th May	
Topic	**Transformations**	**Probability**	**Congruence and similarity**			
	Enlargement Reflection	Probability scale, single and combined events	Applying concepts to shapes, congruence criteria for triangles	**Assessments** **Year 10 Mock Exams**		HALF TERM
Challenge	Negative & fractional scale factors	Probability trees Mutually inclusive & exclusive outcomes	Congruence & Similarity in 2 & 3D shapes Similar shapes area and volume			
Assessment						
W/C	1st June	8h June	15th June	22nd June	29th June	6th July
Topic	**Work Experience**	**2D/3D shapes**	**Calculating with percentages**	**Measures**	**Statistical measures**	**Constructions and loci**
		Plans and elevations of 3D shapes Compound shapes	Percentage increase/ decrease, find original value, simple interest	Conversion between metric and imperial, compound measures	Mean, median, mode, range, comparing data sets	Ruler and compass constructions, application to loci problems Islamic Art Constructions
Challenge		Nets of Cylinders & Cones Use of sine cosine and area sine rule.	Compound interest Percentage multipliers Reverse percentages Algebraic percentage multipliers	History of maths Imperial measures & coinage	MMMR of grouped data	Islamic Art Constructions In Circles & Ex circle constructions
Assessment						