

Mathematics Long Term Plan Year 7 2019-20

Temperance Term

W/C	2nd September	9th September	16th September	23rd September	30th September	7th October	14th October	21st October
Topic	Getting to know you		Problem solving	Baseline Assessment	Number & Place Value			Number: Addition & Subtraction
	Ice Breakers	Clocks Farm	Investigations from problem solving folder.	Assessments & Problem solving	Understand and use place value for decimals, measure and integers of any size Order positive and negative integers, use the number line as a model for ordering of the real numbers: use the symbols =, Round numbers and measure to an appropriate degree of accuracy (e.g. number of decimals places or significant figures)			Use formal written method for addition and subtraction of integers and decimals.
Challenge		Produce algorithms of increasing complexity eg: Algebraic	Apply independent thinking & processes	Apply independent thinking & processes	Recognising concept of very big and very small numbers			
Assessment				AQA KS3 assessments				
W/C	4th November		11th November	18th November	25th November	2nd December	9th December	
Topic	Number: Addition & Subtraction		Number Multiplication & Division		Number Multiplication & Division			CHRISTMAS
	Recognise and use relationships between addition and subtraction including inverse operations Calculate and solve problems including perimeter		Multiply and divide by 10, 100 and 1000 Use formal written methods for multiplication and division of decimals and integers including different methods eg grid, Napier's bones, Vedic or Russians peasant Recognise and use relationships between operations including inverse operations		Use the concepts and vocabulary of prime numbers, factors, common factors and highest common factor Use integer powers and real roots (square, cube and higher), recognise powers or 2,3,4,5 and distinguish between exact representations and their decimal approximations Prime Factor decomposition Area of rectangles, triangles and parallelograms Calculate the mean average Use approximation through rounding to estimate answers and calculate			
Challenge	Inverse Operations		Understand the order of operations		Calculating in standard index form possible error bounds using inequality notation BIDMAS / BODMAS			
Assessment								

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Justice Term

W/C	6 th January	13 th January	20 st January	27 th January	3 rd February	10 th February	HALF TERM
Topic	Number Fractions 1						
	Represent fractions using diagrams and on a number line Express one quantity as a fraction of another Identify and use equivalent fractions Compare and order fractions using symbols \geq , \leq , $=$, $<$, $>$ Simplify Fractions Convert between fractions and decimals: - associating a fraction with division to convert any fraction to decimals Use concepts and vocabulary of multiples and lowest common multiple Add, subtract, multiply and divide fractions						
Challenge	Convert between mixed numbers and improper fractions Find fractions of an amount.						
Assessment							
W/C	24 th February	2 nd March	9 th March	16 th March	23 rd March	30 th March	EASTER
Topic	Revision/ Assessment	Statistics		Number Negative Numbers	Geometry: Shape	Problem solving	
		Types of data Primary, Secondary Quantitative & Qualitative Mean, median, mode and range	Collect and analyse data: tally charts, 2 way tables. Draw and interpret pictograms, bar and pie charts	Use the 4 operations with negative numbers	Properties of triangles and quadrilaterals Naming 2d and 3 d shapes Constructing shapes using compasses, protractors and rulers	Investigations from problem solving folder.	
Challenge			Interquartile range boxplot, applying inverse operations.	BIDMAS / BODMAS	Constructing shapes using compasses, protractors and rulers	Apply independent thinking & processes	
Assessment	AQA KS3 assessments						

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Courage Term

W/C	20 th April	27 th April	4 th May	11 th May	18 th May	HALF TERM
Topic	Algebra 1					
	Introduction to algebra: Understand that a letter represents a variable Understand the difference between an expression, equation, formula, term, function and identity Create equations for problem solving Use and interpret algebraic notation Substitute numerical values into formula and expressions (including negatives)		Simplifying linear expressions expand & factorise linear expressions Solve simple equations with 1 variable		Sequences & patterns; recognise arithmetic sequences and find the nth term. Generate terms of a sequence from either a term to term or position to term rule	
Challenge	Expand & factorise linear expressions		Rearranging formulae Solve equations with more than 1 variable		Finding Nth term rule for Quadratic sequences	
Assessment						
W/C	1 st June	8 th June	15 th June	22 nd June	29 th June	6 th July
Topic	End of year examinations and Revision		Geometry & Angles			Problem Solving
			Describe, sketch and draw points, lines, parallel lines, perpendicular lines, right angles, regular polygons and other polygons that are reflectively and rotationally symmetric. Derive and illustrate properties of triangles, quadrilaterals, circles etc Use a protractor to measure and draw angles Angle properties: straight line, at a point, parallel lines.			Investigations from problem solving folder – focused on geometry where possible
Challenge			Derive and use the sum of angles in a triangle and a quadrilateral Use the sum of angles in a triangle to deduce the angle sum in any polygon and derive properties of regular polygons.			
Assessment	KS3 Internal Exams: AQA KS3 assessments					