

Elements Curriculum Plan

Subject: Mathematics

Building Block 4 ≈ KS3 (Y8)			
Half-Term	Topic/Content	Skills	Personal Development
Autumn 1	Number Review	<ul style="list-style-type: none"> • Recap on formal mental and written arithmetic methods using integers, decimals and directed numbers • Solve problems in context • Develop mental strategies • Estimation and rounding to a given number of decimal places • Using order of operations 	Communication Problem Solving Life Skills Staying Safe
	Proportional Reasoning –ratio and scale	<ul style="list-style-type: none"> • Understand ratio and it's link to multiplication • Use ratio notation • Reduce ratios to their simplest form • Solve ratio problems 	Communication Problem Solving Life Skills
	Proportional Reasoning – multiplicative change	<ul style="list-style-type: none"> • Understand scale factors and it's link to ratio, solve simple direct proportion problems • Convert between currencies using graphs • Draw and interpret scale diagrams and maps • Use ratio notation 	Communication Problem Solving Life Skills Staying Safe
Assessment			
Autumn 2	Fraction and percentages review	<ul style="list-style-type: none"> • Multiplying and divide fraction by an integer • Multiply and divide a fraction by a fraction • Understand and use the reciprocal • Deepen understanding of fractions, decimals and percentages • Evaluate percentage increases and decrease • Use multipliers to solve percentage problems • Express one number as a percentage of another 	Communication Problem Solving Life Skills

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	Representations- Cartesian Plane	<ul style="list-style-type: none"> • Use co-ordinates in 4 quadrants • Plot and interpret straight line graphs • Understand equations of straight line including parallel to axis • Make links between direct proportion • Model situations by translating them into expressions formulae and graphs 	Communication Problem Solving Teamwork
	Representing data	<ul style="list-style-type: none"> • Draw and interpret scatter graphs • Understand correlation • Draw and use lines of best fit • Understand grouped and ungrouped discrete and continuous data • Design and use two way tables 	Communication Problem Solving Life Skills Staying Safe Self-Awareness
Assessment			
Spring 1	Probability	<ul style="list-style-type: none"> • List outcomes using sample space diagrams for one and two events • Find probabilities using tables, Venn diagrams • Find probabilities from experimental data. 	Communication Problem Solving Life Skills Staying Safe Self- Awareness
	Algebraic Techniques- brackets equations and inequalities	<ul style="list-style-type: none"> • Expand and factorise single brackets • Form and use expressions, formulae and identities • Form and solve equations and inequalities with and without brackets • Distinguish between equations, expression, formulae and identities. 	Communication Problem Solving Life Skills
	Sequences	<ul style="list-style-type: none"> • Generate more complex sequences(brackets/squared terms) both algebraically and in words 	Communication Problem Solving
Assessment			

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Spring 2	Indices	<ul style="list-style-type: none"> • Form expressions using indices • Understand and use the addition and subtraction rules 	Communication Problem Solving
	Standard Form	<ul style="list-style-type: none"> • Convert between numbers in ordinary and standard form • Compare numbers given in standard form • Calculate with numbers given in standard form with and without a calculator • Understand reasons why we use standard form 	Communication Problem Solving Life Skills
Assessment			
Summer 1	Angles in parallel lines and polygons	<ul style="list-style-type: none"> • Review angle knowledge • Understand and use parallel lines and angles • Revisit geometric notation • Work out angles in special quadrilaterals • Find and use sum of interior angles of a polygon • Prove simple geometric facts. 	Communication Problem Solving Life Skills
	Area	<ul style="list-style-type: none"> • Review area of shapes knowledge • Calculate the area of a trapezium • Calculate the area of a circle and parts of a circle • Calculate the area of compound shapes 	Communication Problem Solving Life Skills
	Symmetry and reflection	<ul style="list-style-type: none"> • Recognise the symmetry of polygons and other 2d shapes • Reflect shapes in horizontal, vertical and diagonal lines. 	Communication Problem Solving
Assessment			
Summer 2	The Data handling cycle	<ul style="list-style-type: none"> • Understand and use primary and secondary sources of data • Collect data including using questionnaires • Interpret and construct and interpret pie charts • Interpret and construct diagrams including compound and multiple bar charts • Compare distributions using charts • Identify misleading graphs 	Communication Problem Solving Life Skills Staying Safe Self-Awareness Teamwork Leadership

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	Measures of location and dispersion	<ul style="list-style-type: none">• Revisit averages, including finding the total if given the mean• Find the mean of grouped data• Work out mode and modal class• Compare distributions using charts• Choose appropriate average• Compare distributions using measures• Know most appropriate average to use.	Communication Problem Solving Life Skills Teamwork Leadership
Assessment			

Rationale –

BB3-5

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BB6ab

As above, plus:

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