

YEAR 8 COURSE GUIDE

	Selected Success Criteria, from this year's course	
UNIT 1: RATIO AND SCALE	<ul style="list-style-type: none"> Understand and use ratio notation; relate ratios to fractions Solve problems involving division in a ratio, where the total is given Solve problems where one part or the difference is given Simplify ratios, including with different units or simple decimals Express a ratio in the form 1:n or m:1 Calculate the circumference of a circle (non-exact answers) 	
UNIT 2: MULTIPLICATIVE CHANGE	<ul style="list-style-type: none"> Solve simple problems involving two quantities in direct proportion Represent direct proportion on a graph Use a conversion graph Convert between currencies and solve related problems Find lengths, scale factors and ratios for similar shapes Solve problems involving scale diagrams, scale models and map scales 	
UNIT 3: MULTIPLYING AND DIVIDING FRACTIONS	<ul style="list-style-type: none"> Multiply an integer by a fraction Multiply a pair of fractions; square or cube a fraction Divide an integer or fraction by a fraction 	
UNIT 4: WORKING IN THE CARTESIAN PLANE	<ul style="list-style-type: none"> Identify/draw lines parallel to the axes, and $y=x$, using equations Relate line graphs to direct proportion Explore graphs with a negative gradient Plot graphs of the form $y=mx+c$ 	
UNIT 5: REPRESENTING DATA	<ul style="list-style-type: none"> Plot scatter graphs; describe the relationship and the correlation shown Draw and use a line of best fit; identify outliers Identify non-linear relationships Identify types of data (qualitative, quantitative, discrete, continuous) Read/interpret grouped and ungrouped frequency tables Represent grouped discrete data and continuous data Represent data in two-way tables 	
UNIT 6: TABLES AND PROBABILITY	<ul style="list-style-type: none"> Construct sample spaces in lists and using a sample space diagram Identify a probability from a list, a sample space diagram, a two-way table, or a Venn diagram Use the product rule to find the number of possible outcomes 	
UNIT 7: BRACKETS, EQUATIONS AND INEQUALITIES	<ul style="list-style-type: none"> Form algebraic expressions; use negative numbers with algebra Expand (multiply out) a single bracket Simplify a sum or difference of two single brackets Factorise into a single bracket Solve equations involving brackets; form and solve equations with brackets Solve linear inequalities and identify possible integer solutions Identify formulae, expressions, identities and equations 	
UNIT 8: SEQUENCES	<ul style="list-style-type: none"> Generate sequences from position-to-term (nth term) rules 	
UNIT 9: INDICES	<ul style="list-style-type: none"> Simplify expressions with indices: add and subtract Simplify expressions with indices: multiply and divide 	

UNIT 10: FRACTIONS AND PERCENTAGES	<ul style="list-style-type: none"> Convert fluently between fraction, terminating decimals and percentages Calculate fractions and percentages of amounts (non-calc) Calculate fractions and percentages of amounts (calculator) Calculate percentage increase/decrease using a multiplier Express one quantity out of another as a fraction or percentage Solve a range of worded questions involving percentages 	
UNIT 11: STANDARD FORM	<ul style="list-style-type: none"> Convert large numbers to/from standard form Investigate negative powers of 10 Convert small numbers to/from standard form Compare and order numbers in standard form Add and subtract numbers in standard form, with and without a calculator Multiply numbers in standard form, with and without a calculator Divide numbers in standard form, with and without a calculator 	
UNIT 12: NUMBER SENSE	<ul style="list-style-type: none"> Estimate by rounding Round to up to 3 decimal places and up to 3 significant figures Understand and write error intervals for rounded numbers Convert between metric units of length, mass & capacity 	
UNIT 13: ANGLES IN PARALLEL LINES AND POLYGONS	<ul style="list-style-type: none"> Use basic angle rules and notation Know and use the rules for angles near parallel lines Construct triangles and special quadrilaterals, using protractor or compasses Calculate interior and exterior angles in polygons 	
UNIT 14: AREA OF TRAPEZIA AND CIRCLES	<ul style="list-style-type: none"> Calculate the areas of rectangles, triangles and parallelograms Find lengths using areas Calculate the area of a trapezium Calculate the area of a circle, semicircle or quadrant, including in terms of pi Calculate the perimeter and area of compound shapes 	
UNIT 15: REFLECTION	<ul style="list-style-type: none"> Recognise line symmetry Reflect a shape in a horizontal or vertical line, on axes Reflect a shape in a 45° diagonal line, including $y=x$ & $y=-x$ 	
UNIT 16: THE DATA HANDLING CYCLE	<ul style="list-style-type: none"> Set up a statistical enquiry Design and criticise a questionnaire Interpret pictograms and bar charts Interpret pie charts, using angles (measured and given) Construct pie charts, by calculating angles 	
UNIT 17: MEASURES OF LOCATION	<ul style="list-style-type: none"> Identify/calculate the mean, median and mode Choose the most appropriate average for a given situation, understanding the advantages and disadvantages of each Identify outliers from data Use an average and range to compare data 	