

Curriculum overview for Year 8 (Foundation Term 1)

Term	Autumn 1					Autumn 2				
Topic	Number System	Directed Numbers, Decimals & Fractions	Calculation Methods	Visualising & Construction	Shape Properties	Time	Algebraic Proficiency	Data Collection & Presentation	Fractions	Percentages
Knowledge	Factors. Multiples. Primes. Factor trees. Squares, cubes, roots & powers. Triangle numbers. KO 32, 14	Symbolism for comparing. Rules for +/- directed numbers. Real life situations. Fraction diagrams Order and compare integers, decimals fractions. KO 32, 23	Grid method. Estimation to check. Short division – integers and decimals. Order of operations (DMAS) KO 4	Measure, estimate, draw lines & angles. Understand line symmetry. Construct triangles with protractor. KO 7	Draw common polygons on grids. Know and sort 2D & 3D shapes by their properties. 3D shapes on isometric paper. KO 26, 19	Contexts. Conversions. 12-hour, 24-hour time. Duration of activities. --	Collect terms. Brackets. Substitute. Function Machines. Graph of input/output functions. KO 1, 25	Collection methods. Primary data Secondary data Data collection exercise. Tally Chart. Bar Chart. Time Series. Pie Chart. KO 6	Convert Improper fraction to mixed number. Fraction of amount. KO 32, 8	Percentage of an amount : non-calc methods. Increase/decrease by multiples of 5%, 10% Problem Solving (PS) KO 32, 10, 29
Skills	Grid method Bus-stop method for division Short multiplication (any number by single digit) Apply algorithm/routine. Estimate magnitude of number.			Use of mathematical equipment. Drawing, measuring accurately. Simple shape properties and vocabulary. Types of angles. Visualisation.	Arithmetic. Basic time facts. Multiples of 60, 12, 24	Basic conventions. BODMAS Memorise key words.	Graphing. Draw, read and interpret charts. Factors of 360. Use of drawing equipment.	Factors, multiples, sense of number. Use of mathematical diagrams.	4-rules arithmetic. Apply 1-2-5-10 method to PS	
<<<<<<<<<< Mental arithmetic, pencil and paper methods and calculator use; sense of number, sense of scale, sense of shape, reasoning, using and applying >>>>>>>>>>										
Key Marked Piece (Summative Assessments in bold)	Assessment 1 Number system, directed numbers, decimals, fractions, calculations.					Assessment 3 Time, algebra, aspects of prior work.				
	Assessment 2 Visualisation and shape properties, aspects of prior Y8 work.					Assessment 4 Data presentation, FDP, aspects of prior Y8 work.				
Vocabulary	<p>Number System, Calculations, Fractions and Percentages</p> <p>Factor, multiple, square number, cube number, positive, negative, integer, bus-stop, short division, short multiplication, decimal, root, triangle number, directed number, positive, negative, magnitude, equivalent, common factor, denominator, numerator, improper, mixed number, percentage, increase, decrease. <u>Symbols:</u> =, ≠, <, >, ≤, ≥</p> <p><u>Visualising, Construction and Shapes</u></p> <p>Measure, estimate, accurate, accuracy, regular, irregular, compare, angle, side length, compasses, protractor, properties, parallel, perpendicular, diagonal, horizontal, vertical, face, edge, vertex, vertices, right angle, isometric, symmetry, symmetrical, reflection, construct, obtuse, acute, identical, equal, square, circle, triangle, isosceles, scalene, equilateral, polygon, quadrilateral, rectangle, parallelogram, trapezium, arrowhead.</p> <p><u>Time</u></p> <p>Second, millisecond, minute, hour, day, year, decade, century, analogue, digital, duration, length, timetable,</p> <p><u>Data Collection</u></p> <p>Primary, secondary, data, categorical, numerical, pictogram, tally chart, 5-bar gate, bar chart, comparative, composite, line graph, time-series, pie chart, angle, proportion, collect, survey, experiment, questionnaire.</p> <p><u>Algebra</u></p> <p>Term, expression, substitution, solve, function machine, input, output,</p>									

Curriculum overview for Year 8 (Foundation Term 3)

Term	Summer 1			Summer 2		
Topic	Transformations	Algebraic Graphs	Conversion Graphs	Venn diagrams	Probability and Frequency Trees	Mode, median, mean and range
Knowledge	Co-ordinate axes in 4 quadrants. Reflect (horizontal, vertical & diagonal mirror lines). Rotate (with centre of rotation & angle) Translate (with simple column vectors) Enlarge using whole number scale factor. KO 15 (1-6 ONLY)	Plot and draw horizontal, vertical and diagonal graphs using algebra. Recognise equation of the form $y = a$ number and $x = a$ number. Plot and investigate using $y = mx + c$ and $x + y = a$ number KO 25, 40	Plot and use diagonal (conversion) graphs using a formula or worded rule. Convert between measures using graphs. KO 25, 40, 21	Read, draw, and use Venn diagram and simple set notation. KO 16	Basic probability. Listing & tables Relative frequency. Read/interpret/draw frequency trees. Experiments. Expectation KO 11	Calculate Mode, Median, Range, Mean. Describe distributions. Compare data sets. KO 5
Skills	Drawing with basic equipment. Plotting axes and points on grid. Pattern spotting with diagrams. Take readings from graphs. Work with various units of measurement. Use $y = mx + c$.			Use/ understand set symbolism. Read mathematical diagrams. Number/ arithmetic skills. Types of numbers. Interpret worded descriptions.	Probability line Organise information Basic FDP Reading diagrams & tables.	Memorise methods for each measure. Arithmetic Ordering numbers
<<<<<<<<<< Mental arithmetic, pencil and paper methods and calculator use; sense of number, sense of scale, sense of shape, reasoning, using and applying >>>>>>>>>>						
Key Marked Piece (Summative Assessments in bold)	<u>Assessment 9</u> Rounding, Transformations, aspects of prior Y8 work. <u>Assessment 10</u> Graphs only.			ASSESSMENT 11 SUMMMATIVE TWO PAPERS – ONE CALC AND ONE NON-CALC. All y8 topics		
Vocabulary	<u>Transformations and Types of Graphs</u> Rotate, rotation, reflect, reflection, translate, translation, enlarge, enlargement, axis, axes, co-ordinates, mirror line, horizontal, vertical, diagonal; substitute, linear, straight, quadrant, gradient, intercept, expand, brackets, simplify, collect like terms, quadratic, grid method, expression, equation, convert, conversion, measure, rate. <u>Venn Diagrams, Probability and Data</u> Element, set, notation, union, intersection, universal set, probability line, chance, likelihood, outcome, event, random, fair, unlikely, equally likely, impossible, certain, combination, possibility space, theoretical, experiment, frequency tree; discrete, continuous, data, mode, median, range, mean, distribution, data, increase, decrease, more than, less than, same.					