

## Year 8 Curriculum

Term	Topic	Details
1	Percentages	Converting between fractions, decimals and percentages, percentages of amounts, writing as a percentage, increasing and decreasing by a percentage, percentage change, reverse percentages, multipliers, using multipliers for increasing and decreasing by a percentage
	Sequences	Term-to-term rules, identifying arithmetic and geometric sequences, nth term of arithmetic sequences, squares and cubes, nth term of quadratic sequences, generating sequences from nth term
	Expressions	Expressions, simplifying expressions by multiplications and using indices, substitution, using a calculator effectively, collecting like terms, expanding brackets, algebraic factors, factorising, equality inverse operations, solving equations with brackets
2	Forming and solving equations and inequalities	Expressions and equations, Equations and identities, Perimeter equations, Bar modelling, Equating linear expressions, Solving further linear equations, Solving geometric problems using linear equations, rearranging formulae, Inequality notation, representing on number line, testing if values satisfy inequalities, Solving inequalities, forming inequalities
	Linear graphs	Plotting and identifying points, equations of horizontal and vertical lines, gradients and y-intercepts of line graphs, equations of lines, plotting linear graphs, identify if a point lies on a line, midpoints
	Accuracy and estimation	Rounding to nearest integer, thousand, hundred and ten, rounding to decimal places, rounding to significant figures, truncating, identifying rounding errors, estimating calculations, under- and over-estimates

	Ratio review	Simplify ratios, equivalent ratios, dividing into ratio, ratios and fractions, writing in the form $1:n$ , rates of change, problem solving with ratio
3	Real life graphs	Representing linear relationships, Piecewise relationships, Sketching graphical relationships, Speed as rate, Distance–time graphs, Displacement–time graphs – including travel & conversion graphs
	Direct and inverse proportion	Multiplicative relationships, Introduction to conversion, Direct proportion in the Cartesian plane, Gradient and the constant of proportionality, Direct proportion – unitary method, Direct proportion – non integer constants, Inverse proportion, , Generalising direct and inverse proportion, Speed, distance and, time, Percentage change with speed, distance and time – including best buys, density & speed
4	Univariate data	Types of data and Data collection, Representing data and Comparing representations, The mean and Using the mean, A changing mean, Means from frequency tables, Finding averages from bar charts, Project: What is the average year 8 student?
	Bivariate data	What is bivariate data, representing bivariate data, correlation and Lines of best fit, Using the line of best fit, Median and range from scatter graphs
5	Bearings	Introduction to bearings, Bearings and the Cartesian plane, Bearings and polar grids, Finding your bearings, Bearings – finding missing angles, Generalising A from B and B from A
	Angles in polygons	Polygons and Interior angles, compounding triangles, Sum of interior angles of a polygon, Generalising the sum of interior angles, Finding missing angles in polygons
	Circles	Anatomy of a circle, Circle constructions, Circumference, Perimeter of compound

		shapes, Area of circles, Area of sectors, Area and perimeter of compound shapes
6	Volume and surface area of prisms	Faces, edges and vertices, Nets of cubes, Nets of cuboids, Surface area of cuboids, Prisms, Nets of prisms, Volume by counting cubes, Volume of cuboids, Volume of prisms
	Maths art and investigations	Celtic art with compasses, Art with hexagons, Investigations

Each topic is tested through low stakes testing on a regular basis and students receive feedback and the opportunity to improve.

There are 3 main assessment points in the year.