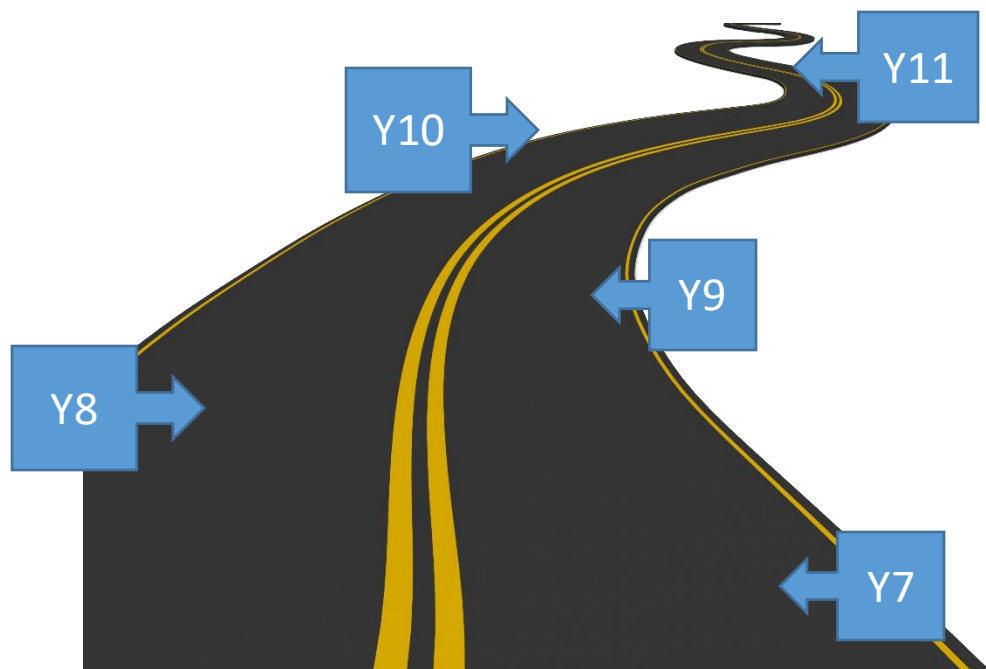




Curriculum Milestones

Year 7 - 11

Mathematics



KEY STAGE 3

At the end of Year 7, Students will know about and be able to do the following:	At the end of Year 8, Students will know about and be able to do the following:	At the end of Year 9, Students will know about and be able to do the following:
Analysing & Displaying Data Number Skills Expressions, Functions & Formulae Decimals & Measures Fractions & Percentages Probability Ratio & Proportion Lines & Angles Sequences & Graphs Transformations	Number Area and Volume Statistics, Graphs & Charts Expressions & Equations Real Life Graphs Decimals & Ratio Lines & Angles Calculating with Fractions Straight-Line Graphs Percentages, Decimals & Fractions	Indices & Standard Form Expressions & Formulae Dealing with Data Multiplicative Reasoning Constructions Sequences, Inequalities, Equations & Proportion Circles, Pythagoras & Prisms Comparing Shapes Graphs Probability



KEY STAGE 4 Higher

At the end of Year 10, Students will know about and be able to do the following:	At the end of Year 11, Students will know about and be able to do the following:
Powers, decimals, HCF and LCM, positive and negative, roots, rounding, reciprocals, standard form, indices and surds Expressions, substituting into simple formulae, expanding and factorising, equations, sequences and inequalities, simple proof Averages and range, collecting data, representing data Fractions, percentages, ratio and proportion Angles, polygons, parallel lines; Right-angled triangles: Pythagoras and trigonometry Real-life and algebraic linear graphs, quadratic and cubic graphs, the equation of a circle, plus rates of change and area under graphs made from straight lines Perimeter, area and volume, plane shapes and prisms, circles, cylinders, spheres, cones; Accuracy and bounds Transformations; Constructions: triangles, nets, plan and elevation, loci, scale drawings and bearings Solving quadratic equations and inequalities, solving simultaneous equations algebraically Probability Multiplicative reasoning: direct and inverse proportion, relating to graph form for direct, compound measures, repeated proportional change Similarity and congruence in 2D and 3D	Sine and cosine rules, $ab \sin C$, trigonometry and Pythagoras' Theorem in 3D, trigonometric graphs, and accuracy and bounds Statistics and sampling, cumulative frequency and histograms Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics Circle theorems and circle geometry Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof Vectors and geometric proof Direct and indirect proportion: using statements of proportionality, reciprocal and exponential graphs, rates of change in graphs, functions, transformations of graphs



KEY STAGE 4 Foundation

At the end of Year 10, Students will know about and be able to do the following:	At the end of Year 11, Students will know about and be able to do the following:
Number, powers, decimals, HCF and LCM, roots and rounding Expressions, substituting into simple formulae, expanding and factorising Drawing and interpreting graphs, tables and charts Fractions and percentages Equations, inequalities and sequences Angles, polygons and parallel lines Statistics, sampling and the averages Perimeter, area and volume Real-life and algebraic linear graphs Transformations Ratio and Proportion Right-angled triangles: Pythagoras and trigonometry Probability	Probability Multiplicative reasoning: more percentages, rates of change, compound measures Constructions: triangles, nets, plan and elevation, loci, scale drawings and bearings Algebra: quadratic equations and graphs Perimeter, area and volume 2: circles, cylinders, cones and spheres Fractions, reciprocals, standard form, zero and negative indices Congruence, similarity and vectors Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations