

Maths Curriculum Pathway 2022-23

Key Stage 3

This year the key stage three students will be working on a range of topics from numbers and the number system, geometry and measures, ratio and proportion, mathematical movements on grids, measures, shape and space, presentation of data, handling information and measuring data. They will be revising and practising good non calculator written methods but also developing their calculator skills, which will be essential for some topics this year, and good preparation for future external exams in Y10 and Y11.

Key Stage 3 Maths Y7 Y8					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Numbers and the number system e.g., negative numbers, prime numbers, rounding, factors, multiples	Geometry and measures e.g., properties of 2D and 3D shapes, nets, angle rules	Number and calculating e.g., sequences, fractions, decimals, percentages	Ratio and proportion e.g., similar shapes, scale factors, enlargements, proportions for a recipe, sharing in a ratio Mathematical movement e.g., coordinates, translate and reflect shapes on a grid	Measures, shape and space e.g., area, perimeters and volumes, metric units Presentation of data e.g., construct and interpret pie charts and line graphs	Handling information and measuring data e.g., calculate the mean, range, mode and median Algebra e.g., use a formula, basic algebra notation, substitute numbers for letters, solve a simple equation

Foundation GCSE

Those students following the foundation GCSE pathway (Y9-11) will be concentrating on the AQA topic areas - algebra, geometry and measures, ratio and proportion and rates of change, statistics and probability. They will be revising and practising good non calculator written methods. Developing their calculator skills will also be essential for some topics this year and in preparation for external exams.

Maths Y9 GCSE and Functional Skills					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Geometry and measures e.g., perimeters, areas and volumes, circles, 3D shapes	Number e.g., factors, multiples, square roots, powers, indices, rounding and estimating	Statistics e.g., graphs, charts, tables, diagrams, averages	Algebra e.g., using notation and symbols, substituting, formula, simplifying expressions	Number e.g., fractions, percentages, decimals, real life % problems	Algebra e.g., equations, graphs, number machines, coordinates, real life graphs

Key Stage 4 Maths Y10- GCSE and Functional Skills					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Algebra e.g., sequences, inequalities, equations,	Geometry and measures e.g., angle rules, bearings, similar shapes and scale factors	Probability e.g., two-way tables, frequency trees, Venn diagrams, probability trees	Ratio and Proportion e.g., sharing in a ratio, best buy problems, proportions for a recipe	Geometry and measures e.g., enlarging, translating, rotating, reflecting shapes on a grid, accurate drawing and measuring	Number and measures e.g., metric and imperial measure, map scales, compound measures, speed, density

Functional skills Level 2

Students following the functional skills pathway will be concentrating on three topic areas – number and the number system, measures, shape and space and handling information and data. The work will be linked to real life situations and problem solving. They will be revising and practising good non calculator written methods. Developing their calculator skills will also be essential for some topics this year and in preparation for the external exams.

Key Stage 5 Functional Skills L2 Maths		
Autumn	Spring	Summer
Number and the number system e.g., percentages, fractions, decimals, ratio, estimation, real life problem solving, money, budgeting, tax	Handling information and data e.g., averages and range, probability, scatter graphs, real life graphs and charts	Past paper practice
Measures, shape and space e.g., money, compound interest, speed, density, perimeters, areas, volumes, scale drawings	Real-life problem solving questions from all topic areas.	

Higher level GCSE

Sixth form students following the higher-level GCSE pathway will be concentrating on the higher topics in the AQA specification for each area- number, algebra, ratio, proportion and rates of change, geometry and measures, probability and statistics.

Key Stage 5 Higher GCSE Maths					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number e.g., laws of indices, surds, standard form, recurring decimals, bounds	Algebra e.g., rearranging a formula, factorising, simultaneous equations, solving quadratic equations, expanding brackets, drawing graphs	Ratio, proportion and rates of change e.g., gradients, direct and indirect proportion, compound measures, speed, distance, time	Geometry and measures e.g., trigonometry, scale factor enlargement, column vectors, congruence	Probability and statistics e.g., tree diagrams, Venn diagrams, box plots, cumulative frequency graphs, quartiles, histograms	

November examination entries for maths

A few of our students will be following their own individual revision plans for the November GCSE or functional skills papers. The GCSE students will be concentrating particularly on grade 4 and 5 topic areas for example, vectors, trigonometry and Venn diagrams. Students taking the functional skills exams will practise both non calculator and calculator skills, concentrating particularly on solving the longer word problems.