

Key Stage 3 Curriculum Map : Maths

Year 7	Autumn 1			Autumn 2		
	Sequences and functions	Calculations	Shape	Fractions, Decimals and Percentages	Sampling and Discrete Data	Expressions, formulae
Generating linear and non-linear sequences; finding simple nth term rules; mapping diagrams; inverse functions.	BiDMAS in more complex calculations; further arithmetic with negative numbers; efficient use of a calculator.	Circles (circumference and area); surface area and volume of prisms (including cylinders); units in area and volume.	Further percentage change using a multiplying factor; reverse percentages; more complex calculations with fractions.	Types of data; sampling and bias; averages from discrete data; representing discrete data with a variety of diagrams.	Manipulating expressions using indices; further substitution; changing the subject of a simple formula.	
Baseline Test						
Spring 1			Spring 2			
Place value, ordering and rounding	Diversity Activity	Linear Equations	Lines and Angles	Graphs	Continuous and Bivariate Data	
Rounding and estimation; standard form notation and simple calculations.	To explore role models and the development and contributions to mathematics by different cultures.	Form and solve more complicated linear equations.	Angles in polygons; three-figure bearings; geometrical reasoning; Pythagoras' Theorem.	Equation of a straight line; graphs in context; calculating and interpreting gradients.	Averages from grouped data; graphs and tables using continuous data; scatter graphs and correlation.	
Summer 1			Summer 2			
Shapes and Constructions	Perimeter, Area and Volume	Linear Graphs	Probability	Percentages and Ratio	Diversity Activity	
Visualise 2D and 3D shapes; properties of shapes; simple constructions.	Perimeter and area of rectangles, triangles, parallelograms and trapeziums; volume and surface area of a cuboid; metric and imperial units.	Co-ordinates; drawing and understanding straight line graphs.	The 0-1 probability scale; calculate simple probabilities; probabilities of all possible outcomes sum to 1; simple experimental probability	Express one quantity as a percentage of another; compare two quantities using percentages; convert between fractions, decimals and percentages; simple percentage change; understand ratio notation and simple direct proportion.	To explore role models and the development and contributions to mathematics by different cultures.	
<p>PPre unit diagnostic tests to assess prior knowledge of a topic, common fortnightly homework assignments which test problem solving from any topic across prior taught material, questions for mastery to formatively assess progress</p> <p>Common class tests will be issued to test curriculum knowledge before each data capture.</p>						

Key Stage 3 Curriculum Map: Maths

Year 8	Autumn 1			Autumn 2		
	Sequences and functions	Calculations	Shape	Fractions, Decimals and Percentages	Sampling and Discrete Data	Expressions, formulae
Generating linear and non-linear sequences; finding simple nth term rules; mapping diagrams; inverse functions.	BiDMAS in more complex calculations; further arithmetic with negative numbers; efficient use of a calculator.	Circles (circumference and area); surface area and volume of prisms (including cylinders); units in area and volume.	Further percentage change using a multiplying factor; reverse percentages; more complex calculations with fractions.	Types of data; sampling and bias; averages from discrete data; representing discrete data with a variety of diagrams.	Manipulating expressions using indices; further substitution; changing the subject of a simple formula.	
Baseline Test						
Spring 1			Spring 2			
Place value, ordering and rounding	Diversity Activity	Linear Equations	Lines and Angles	Graphs	Continuous and Bivariate Data	
Rounding and estimation; standard form notation and simple calculations.	To explore role models and the development and contributions to mathematics by different cultures.	Form and solve more complicated linear equations.	Angles in polygons; three-figure bearings; geometrical reasoning; Pythagoras' Theorem.	Equation of a straight line; graphs in context; calculating and interpreting gradients.	Averages from grouped data; graphs and tables using continuous data; scatter graphs and correlation.	
Summer 1			Summer 2			
Probability	Equations and Inequalities	Transformations	Ratio and Proportion	Construction and Loci	Diversity Activity	
Mutually exclusive events; sample space and Venn diagrams; relative frequency.	Trial and improvement; solve linear inequalities and represent solution on a number line; creating and solve equations from contextual problems.	Further transformations; enlargement by a negative or fractional scale factor; combined transformations; planes of symmetry in 3D shapes.	Further direct proportion; inverse proportion; calculations with ratios; comparing ratios.	Scale drawing; further ruler and compass constructions; simple loci.	To explore role models and the development and contributions to mathematics by different cultures.	
Pre unit diagnostic tests to assess prior knowledge of a topic, common fortnightly homework assignments which test problem solving from any topic across prior taught material, questions for mastery to formatively assess progress Common class tests will be issued to test curriculum knowledge before each data capture.						

Key Stage 3 Curriculum Map: Maths

Year 9	Autumn 1			Autumn 2		
	Graphs	Fractions/Decimals/ Percentages	Transformations	Indices	Equations	Data Handling and Analysis
	Further linear graphs, intersections, mid points, length of line segments, sketching and simple use of quadratic, cubic and reciprocal graphs.	Further calculations with fractions and decimals, recurring decimals, reciprocals, use of calculator and compound percentage change.	Combinations of transformations, congruence and similarity, and units in length, area and volume.	Powers and roots, laws of indices, using prime factor decomposition, simple surds and standard form.	Complex linear, simultaneous equations (algebraic and graphical solutions) and solving inequalities (including regions on a graph).	Forming hypotheses, calculating averages, range, IQR, statistical diagrams and comparing data sets.
	Baseline Test					
	Spring 1			Spring 2		
	Expressions and Formulae	Pythagoras and Trigonometry	Probability	Proportion and Place Value	Shapes, Construction and Loci	Sequences and Functions
	Expand and factorise expressions (inc. quadratics and solving quadratics), further change of subject and substitution.	Further use of Pythagoras' theorem (inc. 3D problems), use of SohCahToa to find angles and sides, and recognising the trigonometric graphs.	Further probability work including compound events, independent events and use of tree diagrams.	Further ratio problems, direct and inverse proportion, upper and lower bounds, and estimation.	Conventions of diagrams, use of angle properties, constructions and loci.	Finding nth term of fractional sequences, quadratic sequences and further work with functions (inc. inverse and self-inverse functions).
	Summer 1			Summer 2		
	Mensuration	Further Quadratics		Circle Theorems	Set Theory	
	Area and perimeter, circles, arcs and sectors, surface area and volume of prisms.	Introduction of completing the square and the quadratic formula, and further use of quadratic graphs.		Angle properties of circles.	Notation of set theory and the use of two way tables and Venn diagrams to solve logic problems	
Pre unit diagnostic tests to assess prior knowledge of a topic, common fortnightly homework assignments which test problem solving from any topic across prior taught material, questions for mastery to formatively assess progress Common class tests will be issued to test curriculum knowledge before each data capture.						