



Academic Overview 2018-19

Maths						
	Term 1.1	Term 1.2	Term 2.1	Term 2.2	Term 3.1	Term 3.1
Year 7	Place Value Calculations	Decimal Calculations Directed Numbers Units	Properties of 2D Shapes Areas	Types of Numbers Sequences Language of Algebra	Angles Fractions	Reading and Interpreting Tables and Graphs Percentages Medians Perimeters
Year 8	Estimation Ratio and Proportion Fractions Percentage Change	Angles Equations and Formulae	Probability Area	Mean and Comparing Data Coordinates Sequences	Transformations Constructions and Bearings	Plotting Linear Graphs Conversion Graphs Plans, Nets and Elevations
Year 9	Number Properties Rounding & Estimation FDP Fractions	Ratio Percentages 2D & 3D Shapes Angle Properties Angles & Polygons	Algebraic Expressions Algebraic Formulae Linear Equations Inequalities	Units of Measurements Perimeter & Area Populations and Samples Summary Statistics and Outliers	Coordinates and Functions Straight Line Graphs Pythagoras' Theorem Maps and Scale	Transformations 3D shapes Real life graphs
Year 10	Powers, roots & indices Standard Form Circumference & Area of a circle Surface Area & Volume of 3D shapes	Constructions and Loci Compound Measures Statistical Charts and Graphs	Exact form and Surds Trigonometry Sequences	Quadratic Equations Bounds Congruency and Similarity Graphs for grouped data (H)	Probability Manipulating Formulae Areas Under Graphs (H) Revision: Coordinates and Graphs (F)	Simultaneous Equations Circle Theorems (H) Equation of a circle (H) Revision: Angles (F) Revision : Areas (F) Revision Solving Equations (F)
Year 11	Surface Area & Volume of complex shapes Proportion Polynomials & Functions Trigonometry in non-right- angled triangles	Transforming Functions (H) Vectors (H) Algebraic Fractions (H) Iteration (H) Symmetry and Transformations(F)	Revision	Revision		

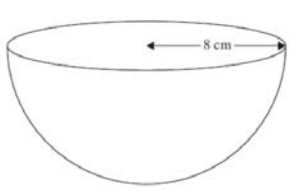


Year 11 (Foundation) Curriculum Content Overview 2017-18

Maths Year 11 (Foundation) Autumn Term 1				
Knowledge and Skills Students will be taught to....	Reading, Oracy, Literacy and Numeracy	Formative Assessment	Summative Assessment	Linked to
<ul style="list-style-type: none"> • Calculate the surface area and volume of spheres, cones and simple composite solids • Calculate the surface area and volume of a pyramid • Solve simple problems involving quantities in direct proportion including algebraic proportions or currency conversion problems. • Solve simple word problems involving quantities in inverse proportion or simple algebraic proportions. • Calculate simple interest including in financial contexts. • Recognise and sketch the graphs of simple linear and quadratic functions. 	Reading <ul style="list-style-type: none"> • Reading for meaning on problem solving questions. • Identifying the maths from a written question 	Questioning in lessons Whole class feedback during lessons Topic check-ins Individual questioning in lessons Individual verbal feedback in lessons	5 assessments throughout the academic year Topic check-ins	Surface area & volumes of 3D shapes, Ratio & Formulae, Coordinates & Functions
	Oracy and Literacy <ul style="list-style-type: none"> • Key words and definitions • Explaining reasoning and methodology when solving mathematical problems 			



Assessment Skills, Knowledge and Concepts Map

Maths Year 11 (Foundation) Autumn Term 1		
Key Learning Questions	Surface Area & Volume of Complex Shapes	Reading
<p>Work out the volume of the hemisphere</p> 	<ul style="list-style-type: none"> • Calculate the surface area and volume of spheres, cones and simple composite solids • Calculate the surface area and volume of a pyramid 	<ul style="list-style-type: none"> • Reading for meaning on problem solving questions. • Identifying the maths from a written question
	Proportion	Oracy and Literacy
<p>A car worth £15 000 new depreciated by 30%, 20% and 15% respectively in three years. How much is it now worth?</p>	<ul style="list-style-type: none"> • Solve simple problems involving quantities in direct and inverse proportion including algebraic proportions • Calculate simple interest including in financial contexts. • Recognise that if $y = kx$, where k is a constant, then y is proportional to x. • Recognise that if $y = k/x$, where k is a constant, then y is inversely proportional to x. • Solve problems step-by-step involving multipliers over a given interval, for example compound interest, depreciation, etc. 	<p>Literacy</p> <p>Plot, Sketch, draw, maximum, minimum, quadratic, cubic, surface, area, vertex, edge, volume, constant, proportion, inverse, reciprocal, increase, decrease, simple, complex</p> <p>Oracy</p> <p>Explaining reasoning and methodology when solving mathematical problems</p>
	Polynomials & Functions	
<p>Draw $y = 2$, $x = 1$, $y = 2x$, $y = x^2$ $y = x^3 - 2x$, $y = x + \frac{1}{x}$, $2x + 3y = 6$</p>	<ul style="list-style-type: none"> • Recognise and sketch the graphs of simple linear and quadratic functions. • Use a table of values to plot polynomial graphs and reciporals. • Identify intercepts and, using symmetry, the turning point of graphs of quadratic functions. • Find the roots of a quadratic equation algebraically. 	



Year 11 (Foundation) Curriculum Content Overview 2017-18

Maths Year 11 (Foundation) Autumn Term 2				
Knowledge and Skills Students will be taught to....	Reading, Oracy, Literacy and Numeracy	Formative Assessment	Summative Assessment	Link to
<ul style="list-style-type: none"> • Understand addition, subtraction and scalar multiplication of vectors. • Represent a 2-dimensional vector as a column vector, and draw column vectors on a square or coordinate grid. 	Reading <ul style="list-style-type: none"> • Reading for meaning on problem solving questions. • Identifying the maths from a written question 	Questioning in lessons Whole class feedback during lessons Topic check-ins Individual questioning in lessons Individual verbal feedback in lessons	5 assessments throughout the academic year Topic check-ins	Transformations
	Oracy and Literacy <ul style="list-style-type: none"> • Key words and definitions • Explaining reasoning and methodology when solving mathematical problems 			



Assessment Skills, Knowledge and Concepts Map

Maths Year 11 (Foundation) Autumn Term 2			
Key Learning Questions	Vectors	Reading	
Draw the vector $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$ If $a = \begin{pmatrix} 3 \\ -1 \end{pmatrix}$ and $b = \begin{pmatrix} -5 \\ 6 \end{pmatrix}$ What is $3a, -b, 2a+4b$?	<ul style="list-style-type: none"> • Understand addition, subtraction and scalar multiplication of vectors. • Represent a 2-dimensional vector as a column vector, and draw column vectors on a square or coordinate grid. 	<ul style="list-style-type: none"> • Reading for meaning on problem solving questions. • Identifying the maths from a written question 	
		Oracy & Literacy	
		Oracy <ul style="list-style-type: none"> • Explaining reasoning and methodology when solving mathematical problems 	Literacy <ul style="list-style-type: none"> • Scalar, vertical, horizontal, parallel, perpendicular