

The Bishop of Winchester Academy Curriculum Plan – Maths

The **Maths** curriculum at The Bishop of Winchester Academy has been designed with the key aim of enabling students to live life to the full. Through the acquisition of knowledge and the practised application of skill, students can have the courage to be wise and make intelligent, informed decisions.

Our knowledge-based curriculum is ambitious in its breadth and depth, offering challenge to learners irrespective of their background. Through setting high expectations and accepting no excuses for all, we counter social disadvantage and bolster aspirations. Students are nurtured and supported throughout their journey at The Bishop, and explore ways to develop their awareness, collaboration, creativity, empathy, independence and resilience, collectively referred to as our LApps (Learning Applications).

Year 7	Michaelmas (M1)	Michaelmas (M2)	Lent (L1)	Lent (L2)	Pentecost (P1)	Pentecost (P2)
Disciplinary Knowledge	Numerical Fluency Integers Decimals Roots and Powers Types of numbers	Proportional Reasoning Intro to Fractions Intro to Percentages Intro to Ratio	Thinking Algebraically Intro to Expressions Intro to Equations Intro to Sequences Intro to Formulae	Mathematical modelling Intro to Coordinates Straight line geometry	Shape and Position 2D shapes 3D shapes Circles	Probability Theory Experiments Language of Probability Analysing & Summarising Data Pictograms Bar charts Pie charts
Disciplinary Skills	Place value Order of operations Estimating	Conversions Growth and decay	Inverse operations Function machines Rearranging	Unit conversions Plotting graphs	Transformations Measuring angles	Finding averages Questionnaires
Personal Developm	Personal finance BV: Rule of Law	TBOWA 200: Alan Turing (Maths of War) BV: Democracy	Christian Character: Golden Ratio LApp: Resilience	BV: Rule of Law TBOWA 200: Rene Descartes	BV: Tolerance LApp: Creativity	BV: Individual Liberty LApp: Independence
Future pathways	Banking & Finance Entrepreneur Teaching	Retail Music composition Insurance	Cryptology Engineering	Project Management Surveying Business Analysis	Architecture Graphic Design Animation	Sports Manager Social media Influencer

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Year 8	Michaelmas (M1)	Michaelmas (M2)	Lent (L1)	Lent (L2)	Pentecost (P1)	Pentecost (P2)
Disciplinary Knowledge	Numerical Fluency Prime Numbers Negative Numbers Significant Figures Reciprocals	Proportional Reasoning Exploring Fractions Exploring Percentages Exploring Ratio and Proportion	Thinking Algebraically Sequence Application Intro to Inequalities Index Notation	Mathematical Modelling Straight- line graphs Quadratic Graphs Kinematic graphs	Shape and Position Compound Shapes Polygons Angle facts	Probability Theory Mutual Exclusivity Venn and Tree Diagrams Analysing & Summarising Data Choropleth maps Time series
Disciplinary Skills	Rounding Finding HCF and LCM	Scale drawing Recipes	Factorising Expanding	Using Compound Units Rates of change	Bearings Constructions	Reliability and Sampling Correlation
Personal development		TBOWA 200: Raymond Blanc TBOWA 200: Alan Turing (Maths of War) BV: Democracy	Christian Character: Golden Ratio	BV: Rule of Law LApp: Collaboration	TBOWA 200: Picasso LApp: Awareness	BV: Democracy
Future pathways	Computer Programmer Electrician Manufacturing	Catering Industry Geographer Hairdressing	Cyber-security Musician	Aviation Police Force Diet & Nutrition	Construction Navigation Art & Design	Social Media Influencer Conservationist

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Year 9	Michaelmas (M1)	Michaelmas (M2)	Lent (L1)	Lent (L2)	Pentecost (P1)	Pentecost (P2)
Disciplinary Knowledge	Numerical Fluency Intro to Standard Form Exploring Indices Index Laws Intro to Surds	Proportional Reasoning Congruence Extended Fraction and Ratio Work Extended Percentage work	Thinking Algebraically Identities and Formulae Simultaneous Equations Quadratic Equations	Mathematical modelling Parallel Graphs Features of Quadratic Graphs Real-life Graphs	Shape and Position Arcs and Sectors 2D Pythagoras 2D Trigonometry	Probability Theory Set Notation Analysing & Summarising Data Scatter Diagrams Histograms Stem and Leaf
Disciplinary Skills	Error Intervals Accuracy	Understanding similarity Compound Interest	Rearranging formulae Substitution	Approximate using graphs	Plans and Elevations Proof	Line of Best Fit Moving Averages Interpolation/Extrapolation
Personal development	LApp: Empathy	TBOWA 200: Alan Turing (Maths of War) BV: Democracy	TBOWA 200: Euclid of Alexandria Christian Character: Golden Ratio	LApp: Awareness	BV: Tolerance TBOWA 200: Maryam Mirzakhani LApp: Independence	
Future pathways	Seismologist Video Game Design Carpentry	Athlete/Sportsperson Marketing Law	Medicine Oceanography Combat Technology	Pharmacy Satellite Technology Sustainable Energy	Forensics Engineering Set Design	Journalism Political Scientist Meteorology

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Year 10	Michaelmas (M1)	Michaelmas (M2)	Lent (L1)	Lent (L2)	Pentecost (P1)	Pentecost (P2)
Disciplinary Knowledge	Numerical Fluency Applying Standard Form Fractional Indices Surds Law	Proportional Reasoning Recurring Decimals Graphical Proportion Algebraic Proportion	Thinking Algebraically Expression Manipulation Iteration 2-Variable Inequalities	Mathematical Modelling Exponentials Perpendicular Graphs Circle Graphs	Shape and Position Surface area and Volume Vectors Circle Theorems 3D Pythagoras & Trig	Probability Theory Tree Diagrams Binomial Distribution Analysing & Summarising Data Cumulative Frequency Box Plots
Disciplinary Skills	Rationalising	Metric to Imperial and Compound conversions	Solving Graphically	Financial Contexts Real-life Inequalities	Invariance Geometric Reasoning	Quality Control Systematic Listing Theoretical vs Experimental probability
Personal development		TBOWA 200: Alan Turing (Maths of War) LApp: Resilience BV: Democracy	Christian Character: Golden Ratio	TBOWA 200: Marie Curie LApp: Collaboration	BV: Tolerance	BV: Individual Liberty TBOWA 200: Hans Rosling LApp: Awareness
Future pathways	Space Exploration Micro Biology	Air Traffic Control Fashion Design Paramedics	Agriculture Construction Programming	Combat Technology Structural Engineering Sound Engineering	Plumbing Graphic Design Biochemistry	Statistician Civil Service

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Year 11	Michaelmas (M1)	Michaelmas (M2)	Lent (L1)	Lent (L2)	Pentecost (P1)	Pentecost (P2)
Disciplinary Knowledge	Numerical Fluency Financial Maths Application Negative Indices Matrices	Proportional Reasoning Proportion equations Scale Factors Algebraic Equations	Thinking Algebraically Functions Inequality Number Lines Quadratic Formula	Mathematical modelling Straight line graphs Advanced Graph Types Graph Transformations	Shape & Position Exact Trig-Values Non-Right Angled Trig	Probability Theory Data Distribution Conditional Probability Analysing & Summarising Data Discrete&Continuous Data Customer Price Index
Disciplinary Skills	Banking Applications	3D Similarity		Sketching graphs	2D&3D Problem Solving	Real-life Statistics Statistical Inference
Personal development	BV: Rule of Law	TBOWA 200: Alan Turing (Maths of War) LApp: Resilience BV: Democracy	Christian Character: Golden Ratio TBOWA 200: Steven Hawking LApp: Awareness	TBOWA 200: Katherine Johnson		BV: Individual Liberty LApp: Collaboration
Future pathways	Accountancy Rocket science	Pharmacy Landscaping Artist	Theoretical Physics Astronomy	Electronics Economist	Architecture Radiography	Medical Research Retail