

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	Shape and Position 2D shapes 3D shapes Circles	Thinking Algebraically Intro to Expressions Intro to Equations Intro to Sequences Intro to Formulae	Mathematical modelling Intro to Coordinates Straight line geometry	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	Transformations Measuring angles	Inverse operations Function machines Rearranging	Unit conversions Plotting graphs	Finding averages Questionnaires
Personal Development	Personal finance BV: Rule of Law	TBOWA 200: Alan Turing (Maths of War) BV: Democracy	BV: Tolerance LApp: Creativity	Christian Character: Golden Ratio LApp: Resilience	BV: Rule of Law TBOWA 200: Rene Descartes	BV: Individual Liberty LApp: Independence
Future pathways	Banking & Finance Entrepreneur Teaching	Retail Music composition Insurance	Architecture Graphic Design Animation	Cryptology Engineering	Project Management Surveying Business Analysis	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	Shape and Position Compound Shapes Polygons Angle facts	Thinking Algebraically Sequence Application Intro to Inequalities Index Notation	Mathematical modelling Straight- line graphs Quadratic Graphs Kinematic graphs	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	Bearings Constructions	Factorising Expanding	Using Compound Units Rates of change	Reliability and Sampling Correlation
Personal development		TBOWA 200: Raymond Blanc TBOWA 200: Alan Turing (Maths of War) BV: Democracy	TBOWA 200: Picasso LApp: Awareness	Christian Character: Golden Ratio	BV: Rule of Law LApp: Collaboration	BV: Democracy
Future pathways	Computer Programmer Electrician Manufacturing	Catering Industry Geographer Hairdressing	Construction Navigation Art & Design	Cyber-security Musician	Aviation Police Force Diet & Nutrition	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	Shape and Position Arcs and Sectors 2D Pythagoras 2D Trigonometry	Thinking Algebraically Identities and Formulae Simultaneous Equations Quadratic Equations	Mathematical modelling Parallel Graphs Features of Quadratic Graphs Real-life Graphs	Probability Theory Set Notation Analysing & Summarising Data Scatter Diagrams Histograms Stem and Leaf
Disciplinary Skills	Error Intervals Accuracy	Understanding similarity Compound Interest	Plans and Elevations Proof	Rearranging formulae Substitution	Approximate using graphs	Line of Best Fit Moving Averages Interpolation/Extrapolation
Personal development	LApp: Empathy	TBOWA 200: Alan Turing (Maths of War) BV: Democracy	BV: Tolerance TBOWA 200: Maryam Mirzakhani LApp: Independence	TBOWA 200: Euclid of Alexandria Christian Character: Golden Ratio	LApp: Awareness	
Future pathways	Seismologist Video Game Design Carpentry	Athlete/Sportsperson Marketing Law	Forensics Engineering Set Design	Medicine Oceanography Combat Technology	Pharmacy Satellite Technology Sustainable Energy	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	Shape and Position Surface area and Volume Vectors Circle Theorems 3D Pythagoras & Trig	Thinking Algebraically Expression Manipulation Iteration 2-Variable Inequalities	Mathematical modelling Exponentials Perpendicular Graphs Circle Graphs	Probability Theory Tree Diagrams Binomial Distribution Analysing & Summarising Data Cumulative Frequency Box Plots
Disciplinary Skills	Rationalising	Metric to Imperial and Compound conversions	Invariance Geometric Reasoning	Solving Graphically	Financial Contexts Real-life Inequalities	Quality Control Systematic Listing Theoretical vs Experimental probability
Personal development		TBOWA 200: Alan Turing (Maths of War) LApp: Resilience BV: Democracy	BV: Tolerance	Christian Character: Golden Ratio	TBOWA 200: Marie Curie LApp: Collaboration	BV: Individual Liberty TBOWA 200: Hans Rosling LApp: Awareness
Future pathways	Space Exploration Micro Biology	Air Traffic Control Fashion Design Paramedics	Plumbing Graphic Design Biochemistry	Agriculture Construction Programming	Combat Technology Structural Engineering Sound Engineering	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	Shape and Position Exact Trig-Values Non-right angled Trig	Thinking Algebraically Functions Inequality Number Lines Quadratic Formula	Mathematical modelling Straight line graphs Advanced Graph Types Graph Transformations	Probability Theory Data Distribution Conditional Probability Analysing & Summarising Data Discrete&Continuous Data Customer Price Index
Disciplinary Skills	Banking Applications	3D Similarity	2D&3D Problem Solving		Sketching graphs	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	Architecture Radiography	Theoretical Physics Astronomy	Electronics Economist	Medical Research Retail

