

Westfield Academy - Curriculum Information

Building on GCSE Mathematics, your child will begin their A Level Pure Mathematics journey, developing fluency in core algebraic techniques, functions and graphs, coordinate geometry and trigonometry. They will extend their understanding of quadratic equations, algebraic methods, sequences and series, and binomial expansion, while learning to work confidently with vectors and transformations. Students will be introduced to calculus through differentiation and integration, alongside exponentials and logarithms, developing their ability to model change and solve increasingly complex problems. They will also strengthen their mathematical reasoning and communication skills through structured problem solving, proof, and application of advanced techniques. Throughout the course, students will regularly consolidate learning through review and exam paper practice, building confidence, accuracy and independence in preparation for A Level assessments and progression beyond sixth form, including UCAS applications.

Maths

Head of Department	C. Okemadu	
Head of Department email	cho@westfield.academy	
Lessons per 2 week cycle	7	
Specification/Board details/Key stage	Edexcel	

Term by term

Autumn 1	Autumn 2	Spring 1
Algebraic Expressions Quadratics Equations and Inequalities Graphs and Transformations Straight line Graphs Circles	Algebraic Methods 1 & 2 Binomial Expansion Trigonometric Ratios	Trigonometric Identities and equations Vectors 1 & 2
Spring 2	Summer 1	Summer 2
Differentiation Integration	Review Exam Paper Practice	UCAS Functions and Graphs

Exponentials and Logarithms		Sequences and Series Binomial expansion Exam Paper Practice
Key Skills developed		
Useful Websites	https://my.integralmaths.org/integral/core/login/index.php https://corbettmaths.com/ https://mathsgenie.co.uk/ https://www.mathslinks.co.uk/	
Reading/Literacy requirements /Key Words	Index Base Surd Quadratic Cubic Exponential Equations Inequalities Simultaneous Expand Factorise Simplify Sketch Identity Function Calculus Integrate Differentiate Exponential Logarithm Function Sequence Binomial	
Homework requirements	Four times times a week	
Personal Development Links	https://www.mathslinks.co.uk/	
Trips/Visits (If applicable)	Robotic Project: The mission is to develop future Space scientists and AI Engineers. We joined the National Robotics & STEM Project, organised by First Tech Challenge UK and Ireland (https://firstuk.org/), designed to equip our students with hands-on experience in engineering, coding, problem-solving, teamwork, and innovation.	

	<p>UKMT Challenge: The mission is to develop confident, high-level mathematical thinkers through participation in the nationally recognised UK Mathematics Trust Challenge. This prestigious national competition attracts students from schools across the UK, providing an opportunity to compete at a recognised national standard.</p> <p>Students tackle rigorous, non-routine problems that strengthen logical reasoning, precision, and resilience under timed conditions, raising aspirations and celebrating mathematical excellence.</p>
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