

Westfield Academy - Curriculum Information

Building on their Year 12 studies, your child will continue to develop their understanding of Applied Mathematics through more advanced topics in Statistics and Mechanics at A Level.

In Statistics, they will extend their knowledge of data analysis by studying regression and correlation in greater depth, alongside conditional probability, the normal distribution and hypothesis testing. In Mechanics, students will explore more complex modelling of physical systems, including moments, friction, projectiles, applications of forces and further kinematics. They will strengthen their ability to apply mathematical reasoning to unfamiliar, real-world contexts, interpret results critically and justify their conclusions clearly.

Throughout the year, students will regularly consolidate their learning through structured review and extensive exam paper practice, building accuracy, fluency and confidence in preparation for final 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	3	
Specification/Board details/Key stage	Edexcel	

Term by term

Autumn 1	Autumn 2	Spring 1
Regression, Correlation & Hypothesis Tests Conditional Probability Normal Distribution	Moments Friction Projectiles	Application of Forces Further Kinematics Exam Paper Practice
Spring 2	Summer 1	Summer 2
Review 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	Population Census Sample Outlier Sampling frame Sampling fraction Bias Sample error Random variable Parameter Categorical Ranked Discrete Continuous Bivariate Probability Estimating Experimental Theoretical Certainty Expectation Hypothesis Significance Critical values Critical regions Asymmetric Direction Scalar Vector Distance Position Displacement Speed Velocity Acceleration Motion Forces
Homework requirements	Four times times a week
Personal Development Links	https://www.mathslinks.co.uk/

Trips/Visits (If applicable)	<p>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> <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>