

## WMG INTENT

*“Mathematics has beauty and romance. It’s not a boring place to be, the mathematical world. It’s an extraordinary place; it’s worth spending time there”  
— Marcus du Sautoy, British mathematician*

### Further Mathematics Curriculum Intent

Further Mathematics builds on all the skills students learn during the maths qualifications. This gives us more opportunities to explore problem solving, digital skills, and applications of advanced maths.

Students will look at how we use more advanced applications of calculus, vectors, sequences, and proof. We also look at matrices and complex numbers: two number systems that will be completely new to most students but have wide reaching impacts in various STEM fields. Through the optional modules we explore: how to find approximate solutions to equations that can’t be solved algebraically; how recurrence relations can model real world situations; and applications of multivariable calculus, all the while using various software to help us. We also look at more abstract concepts such as introductory group theory, and hyperbolic functions.

Beyond the curriculum, we are able to support those students who are looking to do mathematics at Russell Group universities, or are looking to Oxford or Cambridge, by supporting their success in the various entrance exams that many universities now accept (e.g. MAT, STEP, TMUA).

### School Curriculum Intent

At WMG academy our curriculum intent is to provide a STEM focussed curriculum that prepares pupils for the world of work, we are business led; as such we provide a rigorous, expertly sequenced curriculum with engineering at the heart. Alongside the curriculum we have a nurturing pastoral support team providing enrichment and guidance, thoroughly preparing students to be career ready.

### School Mission

WMG Academy aims to send students into the world with a professional attitude, an understanding of business and a mature approach to work.

Our ‘business-like, business-led’ ethos gives students a head start. Employers pay for apprentices to study and work, with many commanding generous starting salaries in secure industries.