

## WMG INTENT

*"I have not failed, but found 1000 ways to not make a light bulb."  
- Thomas Edison*

### Electronics Curriculum Intent

By the end of their learning journey in electronics we intend for our students to be skilled in the understanding and application of electronic theory, circuit design and build, programming of hardware applications and circuit testing & analysis.

Learners will develop skills in:

- Electronics theory and practical investigation
- PCB design skills and manufacturing
- Accuracy
- Problem solving
- Numeracy through electronic formulae
- Report writing
- Analysis

Learners will develop the scientific and engineering skills to analyse and design electronic systems for a range of practical situations. They will work with a wide range of digital and analogue electrical and electronic systems. Learners will develop knowledge and understanding of the physics of electronics, component characteristics and applications, electronic mathematical formulae, materials technology to produce PCBs, multiple programming language syntax, the use of electronic circuit manufacturing and testing equipment.

Electronics is special because it is becoming increasingly integrated into everyday life from mobile phone technology, electric cars, renewable energy sources, media and communication and gaming and as such, has a growing need for competent engineers that are not only competent in their core knowledge but adaptable to emerging technologies and methodologies. Students will experience making an electronic project which combines both hardware and software skills. They will participate in various inter school national and international activities including the Green Power electric racing car challenge.

During your learning journey you will take part in visits to electric car manufacturers, local employers such as Network Rail, JLR, local recording studios and TV/radio stations all of which give valuable insight into possible engineering career paths.

### 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.