GCSE Computer Science

Career Pathways	Subject specific routes: Software Developer, Database Administrator, Computer Hardware Engineer, Computer Systems Analyst, Computer Network Architect, Web Developer, Information Security Analyst, Computer Programmer Computer science is also useful to support work across a vast number of alternative sectors such as: Medicine, Engineering, Finance, Science, Entertainment and Creative.
Examination Board	AQA
Is this the right subject for me?	If you enjoy: • Solving problems and using a computer to carry out these solutions • Creating applications using a coding language • Looking at the internal hardware that makes up a computer • Learning about the latest developments in cybersecurity
What do I need to know, or be able to do, before taking this course?	You **must** have a predicted **GCSE Maths grade of 5 or higher** to take this course, due to the amount of higher level mathematical elements. You will need to have access to a computer at home that you can install a programming language onto in order for you to practice in preparation for the coursework tasks.
What will I learn?	In this course, students will look at a range of topics related to Computer Science. You will look at the fundamental of algorithms, including investigating specific algorithms designed to complete a certain task e.g. sorting and searching data. You will develop your programming skills using high and low-level languages. Using Visual Basic, you will learn how to become an effective programmer, using variables, selection, iteration and subroutines to solve various problems. You will look at computer hardware and computer software in detail, including the components that make up a computer and how they work together with the software to enable you use the computer effectively. Also, you will study the setup of computer networks and the importance of cybersecurity by considering the consequences that digital technology is having on society. Please note, this course is not the same as ICT. You will not be required to create spreadsheets or databases (as you may know them), edit videos, graphics or animation.
Where can GCSE Computer Science take you?	After completing the GCSE Computer Science course, you will be able to continue your studies at Tamworth Sixth Form by studying A-Level Computer Science. This could lead to apprenticeships or university in the computing sector such as Software Developer, Game Programmer or Network Administrator. Computer science A-level is also considered a useful qualification to support study at university of a wide number of disciplines, especially anything maths or science based. Many university courses now include programming modules as part of each year of their degrees.
How the course will be assessed?	This GCSE course is assessed through two written exams and a coursework project. The coursework project is programming based and needs to be completed with 20 hours. The two exams are each worth 50% of the final grade. The first exam tests computational thinking, problem solving and coding skills. The second exam tests theoretical knowledge of computer science. Some extended writing will be expected in the exams