KS4 COURSE OPTIONS – Year 11 Computer Science

Course Title	GCSE in Computer Science
Exam Board	Edexcel
Course Description	The GCSE in Computer Science gets students working with real-world, practical programming techniques that give them a good understanding of what makes technology work. The course gives learners a real, in-depth understanding of how computer technology works. Learners will no doubt be familiar with the use of computers and other related technology from their other subjects and elsewhere. However, the course will give them an insight into what goes on 'behind the scenes', including computer programming, which many learners find absorbing.
Course Content (Term 1,2,3 etc.)	**Term 1 and 2** • Databases and SQL • Issues and Impacts • Emerging Trends **Term 3 and 4** • Computational thinking • Controlled assessment Preparation • Controlled Assessment Activities **Term 5 and 6** • Revision of Y10 and Y11 content • Preparation for final examination assessment
Extra-Curricular Opportunities	• Photography club (digital editing and image manipulation skills) • Kodu Club • Programming Club
Useful Websites	• http://www.teach-ict.com • http://www.computingatschool.org.uk • www.digizen.org • http://www.bbc.co.uk/education

Important Information	Students at Guilsborough selecting Computer Science as a GCSE option have three lessons per week in Year 11, in one of our dedicated IT suites. All lesson materials are digital and hosted on the school VLE. Students do not have exercise books; all work is produced digitally and saved to their Guilsborough network accounts. Computing and computer technology are part of just about everything that touches our lives from the cars we drive, to the movies we watch, to the ways businesses and governments deal with us. Understanding different dimensions of computing is part of the necessary skill set for an educated person in the 21st century. Whether you want to be a scientist, develop the latest killer application, or just know what it really means when someone says 'the computer made a mistake', studying computing will provide you with valuable knowledge.
Provision For Most Able	Students in Computer Science are not set, but are taught in mixed-ability groups. To properly extend and challenge the most able, our schemes of work are differentiated to include a wide range of extension tasks for students identified as more-able/gifted and talented.
Assessment	Students in Computer Science are continually assessed in lessons. The digital nature of the on-screen work means that teachers are able to easily see what a student is doing and give them on-going feedback as they progress through the tasks in a unit of work. Additionally, students are assessed on the work they have done at the end of each sub-unit and given feedback on their successes and how they can further improve. Assessment for the qualification itself is in two parts: **Paper-based assessment:** **Principles of Computer Science -** Written examination: 2 hours. 75% of the qualification. This paper consists of multiple-choice, short open response, open response and extended open response answer questions. **Controlled assessment:** **Practical Programming -** Non-examined assessment: 15 hours. 25% of the qualification. This is a practical 'making task' that enables students to demonstrate their computational techniques using a programming language. Students will: • decompose problems into sub-problems • create original algorithms or work with algorithms produced by others • design, write, test, and evaluate programs.