



## Your Guide to Year 12 Computer Science

### Assessment Criteria

Every half term students are assessed using national curriculum levels and sub levels. Each assessment is marked using this criteria which outlines the differences between each level. This is given to students at the beginning of the school year. A copy is attached for your perusal.

<b>Expectations of Students</b>			
Students are expected to come equipped with appropriate stationary. They also need to read their teachers comments in their books and act on the feedback given. Students are expected to complete their progress tracking in the front of their books after every assessment.			
<b>Year 12</b>	<b>Topic Title and unit</b>	<b>What students will be learning</b>	<b>How you can specifically help your child</b>
HT1	Structure and function of the processor Types of processors Input, output and storage	Understand the purpose of ALU, Control Unit and Registers, Buses and how they relate to assembly language programs. The fetch-decode-execute cycle, including its effect on registers. Understand the factors affecting the performance of the CPU. Understand different processor architectures. Know the differences between and uses of CISC and RISC processors. Understand Multicore and Parallel systems. Know how different input, output and storage devices can be applied to the solution of different problems. Know the uses of magnetic, flash and optical storage devices. Know the difference between RAM and ROM. Understand the need for Virtual storage.	Encourage them to revisit the work they have completed during the lesson.  Ensure they complete their homework. Which can be found on <a href="https://www.showmyhomework.co.uk">https://www.showmyhomework.co.uk</a>  If they have any concerns about any topic they are covering, please do not hesitate to contact Mrs George, email address is below or telephone the school if you would like to speak to her. Tel: 01527 523088
HT2	Operating systems Application generation Introduction to programming	Understand the need for OS. Know what memory management is. Understand the purpose of interrupts and scheduling. Understand the different types of OS. Know the purpose of BIOS, device drivers and virtual machines. Understand the nature of applications and utilities. Know the difference between open and closed source. Know the purpose of the different translators. Now the different procedural and assembly programming language techniques.	
HT3	Databases Networks Web technologies <b>Sixth form mocks week 1</b>	Understand the different types of databases and importance of keys. Know the different methods of handling data. Understand networks and the Internet structure. Know the difference between client-server and peer to peer. Know purpose of different languages for the web. Know the different types of compression	
HT4	Data type and structures Boolean Algebra Understand what is meant by computational thinking. Problem solving Programming Algorithms	Know different data types and structures and how they can be converted and use of addition and subtraction. Understand different types of arrays and properties of stacks and queues. Be able to use and define Boolean logic. Understanding abstraction. Knowing how to think logically and procedurally. Learning how to think ahead in terms of computing. Know different programming techniques Understand software development Understand the use of algorithms to describe problems and standard algorithms.	



HT5	Legal, moral, ethical and cultural issues Year 12 study leave commences 15-06-16 - beginning of week 4	Know the different Acts related to Computers. Understand moral, social, ethical and cultural opportunities and risks of digital technology.	
HT6	H046/1 Computer principles 05-06-17  H046/2 Algorithms and problem solving 09-06-17  Year 12 students return 12-06-17 (beginning of week 2)  Year 12 work experience week 5	Introduction to H446	
<b>Key dates</b> and what students will be doing			

**Contact details**

Name: Mrs C George

Email: CGeorge@redditch.tgacademy.org.uk