Computer Science

Overview of the year:	Ways to consolidate and extend your learning in History:
This year we will finish studying the remaining topics for GCSE and revise the content learned in y10. We will study the following: Design and testing of robust programs, subroutines, search algorithms, operating systems, utility software, Ethical, Legal, Cultural & Environmental Issues surrounding computer systems, programming languages and the associated Development Editors associated with them. Students will also look at threats to a computer system, as well as protective measures. They will look at different types of System Software which enables computers to run. They will also review the ethical, legal, cultural, and environmental concerns of technology.	The main resource for learning GCSE Computer Science are the textbooks, Teach-ICT.com website resources and most importantly your Computer science folder (work done in class). You will also be given a revision guide to help your study this year. Pre-reading the textbook before lessons is a great way to help with your learning of the key knowledge required for GCSE. Re-reading the textbook at home after lessons is an important way to revise and consolidate information. Additionally, online resources such as YouTube videos and BBC bitesize can help further your understanding of topics. A wider list of useful resources is available on the school website. Also look at articles and videos posted on the Teams platform regularly. You should also practise programming at home for at least a few hours a week on tasks we worked in school. Test yourself to see if you can independently code the solutions for the problems we worked in class. This strategy will not only build your programming skills but also reinforce your understanding of algorithms.

Half Term	Unit title	Knowledge	Skills	Assessment (all modules will have an assessment under controlled conditions when finished)
1	Additional Programming techniques. Defensive Design. Testing. Operating Systems Utility Software	Students will learn about design and testing of robust programs, along with developing subroutines and search algorithms. Students will also learn about operating systems, their functionality and how they work with Utility Software.	- Programming - Pseudocode - Validation - Design - Testing and evaluation - Operating System - Utility Software Functionality	- Feedback throughout lessons as part of AfL and CfU. - Written feedback on class work and verbal feedback on unit tests - PPE2 includes everything we have learnt on GCSE course up until this point.
2, 3	Searching and Sorting Algorithm Programming Techniques. Ethics. Revision of all topics	Students will learn about the Ethical, Legal, Cultural & Environmental Issues surrounding computer systems, along with the associated legislation. Students will also learn about different programming languages and the associated Development Editors associated with them	- Legal Issues - Cultural Issues - Computing Legislation - Environmental Issues - Networks - Boolean logic - Computer hardware - Algorithms	- Feedback throughout lessons as part of AfL and CfU. - Written feedback on class work and verbal feedback on unit tests - PPE2 includes everything we have learnt on GCSE course up until this point.
3, 4, 5	GCSE Exam Preparation	Prior attainment of students is used to direct them to appropriate revision materials and intervention.	All skills from previous modules in Y10 and Y11 will be revised and practiced	Feedback throughout lessons as part of AfL and CfU. Written feedback on lesson tasks Whole class feedback following each homework and based on the previous lesson's learning