Y10 COMPUTER SCIENCE

COMPUTER SCIENCE AT YARDLEYS
INTENT: Through our ambitious computing curriculum our learners will have access to a broad and balanced range of topics including: digital literacy, computational thinking and modern technology. Yardley's computing curriculum will provide students with an understanding of how computing underpins today's modern lifestyle and has made the world better, faster and more connected. We ensure that the students at Yardleys can develop to become masters and creators in this field, to aid them in their development of our rapidly changing technological world.
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Building on knowledge gained across KS3 students will develop a greater understanding of the a network and operating system whilst further developing their ability to programme.

Year 10			
	Systems architecture Memory and storage	**Computer networks, connections, protocols and security**	**Systems software Issues**
SUBSTANTIVE KNOWLEDGE	CPU Primary storage/Secondary storage Units Data storage Compression	Types of networks Network Hardware Modes of connection Protocols Forms of attack/Prevention methods	Operating systems Utility software Impacts of digital technology Legislation
DISCIPLINARY KNOWLEDGE (primary focus in capitals)	Why computers have memory and storage Why is data stored as binary How data storage is calculated How to convert between the number forms Understand and carry out binary shift Understand how characters, images and sound are stored on a computer Identify the advantages and disadvantages of lossy and lossless compression	Understanding of different factors that can affect the performance of a network The tasks performed hardware The concept of the Internet and clients Role of the DNS Apply understanding of networks to a given scenario Principles of protocols and encryption How the attack is used & the purpose of the attack What each prevention method may limit/prevent & how it limits the attack	Purpose and functionality of OS and utility software Understand the impacts of computer science issues Purpose and suitability of each legislation Features of open and proprietary software