Y10 COMPUTER SCIENCE

Yardleys School
WORKING TOGETHER FOR A BETTER FUTURE

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

	Networks Network security	Systems software Impacts of digital technology	Algorithms Programming fundamentals
SUBSTANTIVE KNOWLEDGE	Types of networks Network Hardware Modes of connection Protocols Forms of attack/Prevention methods	Operating systems Utility software Impacts of digital systems on the wider society	Computational thinking Understanding and application of Python programming Lists: adding, removing, or modifying items; locating or counting occurrences of particular items Using a for-loop
DISCIPLINARY KNOWLEDGE (primary focus in capitals)	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	Understand the function of the operating system Understand that data is transferred between devices How to manage files and folder Understand that computers often come with utility software, and how this performs housekeeping tasks Technology introduces ethical, legal, cultural, environmental and privacy issues ü Knowledge of a variety of examples of digital technology and how this impacts on so	Perform searching and sorting algorithms Perform common operations Use of Programming language Role of Iteration and selection

We aim to provide students with a curriculum that educates the whole child, creating responsible and respectful citizens. Through the development of substantive and disciplinary knowledge students are given the tools that allow them to achieve excellence and be ready for life.