

KENTON SCHOOL LEARNING JOURNEY – COMPUTER SCIENCE



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Computer Basics & Hardware The basics of computer use (logins, documents, folders etc) along with the function/parts of the processor and the function of the different memory and storage devices.		Computer Software & Safety The function of different software types, the legal/ethical issues of Computing and the methods for ensuring online safety.		Scratch Programming An introduction to a wider range of programming tools in Scratch (including a presentation of a program in PowerPoint).	
Year 8	Representation & Boolean Logic The digital storage of numbers, text, images, and sound along with the creation of logical circuits.		Networks & Safety The structure and function of network types and devices along with the basics of network security/online safety.		Writing Algorithms Writing algorithms using pseudocode and flowcharts and testing/tracing those algorithms.	
Year 9	Python Programming An introduction to a wider range of programming tools in Python.		Standard Algorithms An introduction to sorting and searching algorithms and encryption.		Programming Project The planning, creation, and evaluation of a programming solution in Python.	
Year 10	Programming Techniques The elements of problem solving and an introduction to sequence programming in Python	Programming Techniques An introduction to a wider range of programming tools in Python and SQL.	Algorithms & Robust Programs Standard searching and sorting algorithms and testing tools to assist in the creation of robust programs.	Processing, Memory & Storage The function/parts of the processor and the function of the different memory and storage devices.	Data Representation & Revision The digital storage of numbers, text, images and sound along with the different number systems used.	PPE Preparation & Programming Project Revisions lessons for the Y10 PPE exams and the development and testing of a Python solution. Y10 PPE
Year 11	Networking The structure and function of network types and devices along with the foundations of the Internet and network security.	Software & Ethics The function of different software types and programming tools and the legal/ethical issues of Computing. Y11 PPE 1	Boolean Logic & Paper 2 Revision The function and combination of Boolean logic gates and revision lessons for GCSE Paper 2.	Paper 2 Revision Revision lessons for GCSE Paper 2 including walking-talking mock lessons. Y11 PPE 2	Paper 1 Revision Revision lessons for GCSE Paper 1 including walking-talking mock lessons.	Y11 Examinations

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<p>Year 12</p>	<p>Computational Thinking The elements of computational thinking and an introduction to a range of programming techniques.</p>	<p>Programming Techniques & Algorithms An introduction to a wider range of programming tools in Python and the standard searching/sorting algorithms.</p>	<p>Language Types & Data Structures A comparison of the different types of programming language and abstract structure for data storage.</p>	<p>Data Types & Arithmetic The different number systems used in Computing (binary etc) along with basic arithmetic in those systems.</p>	<p>Hardware & Logic The function of the processor and a range of memory/storage devices and the purpose/use of Boolean logic circuits.</p>	<p>Databases & the Project An introduction to database tools and the SQL language and an introduction to the requirements of the Computing project. Y12 PPE</p>
<p>Year 13</p>	<p>Networks The function and components of networks along with an introduction to the function of the Internet and basic HTML programming.</p>	<p>Software The function of different software types and the differing methodologies used when developing software. Y13 PPE 1</p>	<p>Application Generation & Ethics The function of a range of programming tools and the legal/ethical issues of Computing.</p>	<p>Paper 2 Revision Revision lessons for GCE Paper 2 including walking-talking mock lessons. Y13 PPE 2</p>	<p>Paper 1 Revision Revision lessons for GCE Paper 1 including walking-talking mock lessons.</p>	<p>Y13 Examinations</p>