KENTON SCHOOL LEARNING JOURNEY – COMPUTER SCIENCE

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	**Computer Basics & Software** The basics of computer use (logins, documents, folders etc) along with the function of different software types, the legal/ethical issues of Computing and the methods for ensuring online safety.		**Computer Hardware** The function/parts of the processor and the function of the different memory and storage devices along with the basics of networking.		**Scratch Programming** An introduction to a wider range of programming tools in Scratch (including a presentation of a program in PowerPoint).	
Year 8	**Web Development & Representation** The planning and creation of a multi-page website based on a project brief followed by digital storage of numbers, text, and images.		**Logic & Python Basics** The creation of logical circuits followed by an introduction to basic input/output programs in Python.		**Python Basics** Continued examination of basic input/output programs in Python and conversion of algorithms between Python and flowcharts.	
Year 9	**Python Programming** An introduction to a wider range of programming tools in Python.		**Networking** The structure and function of network types and devices along with the basics of network security/online safety and digital law.		**Algorithms & Web Development** The function of basic searching/sorting algorithms followed by the planning and creation of a multi-page website based on a project brief.	
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**

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