



Year 9

Year 9						
Term 1: Autumn		Term 2: Spring		Term 3: Summer		Age Related Expectations (ARE)
Systems Architecture Purpose: Students will progress their understanding of the CPU, memory and storage, developing key knowledge from Y8 and bridging towards GCSE Computer Science. Knowledge and skills: - The fetch execute cycle & how it works in relation to registers. - How the CPU works in accordance with primary and secondary storage.	Data Representation Purpose: Students will take their understanding of how data is stored in binary further and be able to perform calculations and understand hexadecimal. Knowledge and skills: - How to convert between binary, denary and hexadecimal. - Conversion between different units of storage. - How text images & sound are represented. - Boolean Logic.	Photo Editing Purpose: - Students will learn a variety of design skills across, with a chance to complete a creative product. - They will utilise previous knowledge of file formats. Knowledge and skills: - The different tools within Photoshop including but not limited to: selection tool, layers, the move tool, burn tool, dodge tool, magnetic lasso,	Algorithms Purpose: Building upon computational thinking, students will learn how to construct a flowchart to solve a given problem. Knowledge and skills: - The different flowchart symbols. - How to construct a flowchart/ algorithm to solve a problem. - Expansion of understanding: The four cornerstones of computational thinking.	Networks and Security Purpose: - Students will learn what a network is and what pieces of hardware construct a network. - Students will learn further about the various security threats Knowledge and skills: - What network components construct a network. - How information is transmitted locally and across the	Python Programming Purpose: Students will use text based programming to develop their Python skills each week by creating different programs in the form of games and small interactive systems. Knowledge and skills: - Test, debug and refine their programs regularly throughout development. - Learn to program using input and output, apply previous drag and drop	- Students can undertake creative projects, using a variety of applications, to become competent users of IT. - Students can understand and apply the fundamental principles and concepts of computer science, including binary, Boolean logic, key algorithms and data representation. - Students use computational thinking to analyse problems and use multiple programming languages. - Students learn to design, manipulate and evaluate computational models for a given purpose or audience. - Students can understand a



Parkside School Curriculum Map 2025/6

Applied: Computing

How cores, cache and clockspeed can affect performance.		magic wand and clone tool. How to export graphics.		internet. The security concerns that face computers and networks. Examples include, malware, brute force attacks, denial of service attacks and how they could be prevented.	knowledge; sequence, selection and iteration to text based programs. Introduction to string manipulation, use of mathematical operators and lists/arrays.	range of ways to use technology safely, respectfully, responsibly and securely, including awareness of the impact of cyber security threats. Students can explain the hardware components that make up computer systems, and how they communicate with one another and with other systems.
---	--	---	--	---	--	---