



Year 8						
Term 1: Autumn		Term 2: Spring		Term 3: Summer		Age Related Expectations (ARE)
Key Hardware Elements Purpose: Students will be introduced to the processing computer components and learn the purpose. Students will also be introduced to the fetch execute cycle and will gain an understanding of how computers process data. Knowledge and Skills: The interaction between the CPU and other pieces of hardware	Data Representation Purpose: This unit will explore how files and data are represented in binary form, units of storage and the differences between bitmap and vector images. Students will become familiar with character encoding. Knowledge and skills: The different types of file formats and subsequent file sizes.	Creating Vector Graphics Purpose: Students will get their first introduction to creating vector images. They will explore how graphics are used in real world contexts, producing their own graphic products for a given purpose. Knowledge and skills: - Solidify understanding of image file formats. - Creation of	Cyber Security Purpose: This unit will give students an insight into potential threats and cyber concerns. They will develop online safety practice. Students will present data from a real world context in a graphical format. Knowledge and skills: - Malware and its effects on the digital world. - How to keep safe online.	Text Based Programming Purpose: Students will gradually be introduced to the fundamentals of text based programming. Students will be able to navigate their way around the integrated development environment, building their understanding of the basic features of the Python language. Knowledge and skills: Introduction to	Animation Purpose: Students will explore the different types of animations, their features and their uses. They will learn to plan and create simple animations using both stop-frame and key-frame animation. Knowledge and skills: - Planning an animation using storyboards for a given scenario. - Gathering of digital assets to	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



Parkside School Curriculum Map 2025/6

Applied: Computing

when processing and storing information. • How the fetch execution cycle works. • Introduction to primary memory.	• Key image terms • Introduction to binary representation. • Creation of Bitmap and ASCII images.	effective vector images. • Develop awareness of digital legislation.	• Cyber crime & data presentation (graphical format).	programming keywords and paradigms, bridging the gap between Scratch and Python • Use of platforms such as Edublocks and Codecombat.	re-purpose and create assets of their own. • Seamless animation using adequate time frames.	evaluate computational models for a given purpose or audience. Students can understand a 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.
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