

Year 7 Computer Science	Curriculum Intent: Computing consists of three stands: Computational Thinking, Computer Science and Digital Literacy. Within the Computer Science and Computational Thinking streams we will develop the student’s knowledge and understanding of what a computer is using the Input/Process/storage/output model of computing. In term one exploring the fundamentals of the model. We will examine the logic behind instructions and how they are processed. We de-mystify a computer by explaining what software is and how it is created, providing opportunities for students to develop their own software using a text-based programming language			
Computer Science Year 7:	<p style="text-align: center;">Term 1: Fundamentals of computer systems</p>	<p style="text-align: center;">Term 2: Simple Algorithms, Primary and secondary storage</p>	<p style="text-align: center;">Term 3 Consequences of Using Computers</p>	
Topic Titles (in order of delivery)	<ul style="list-style-type: none"> • What is a computer • Difference between hardware and software • Input / Output Devices • Components of computers • Memory 	<ul style="list-style-type: none"> • What is Memory • The need for storage • What is data and how is it stored • The different application software types <ul style="list-style-type: none"> ○ Office type products ○ Specialised products <ul style="list-style-type: none"> ▪ SIMS ▪ Payroll 	<ul style="list-style-type: none"> • Moral consequence of using computers <ul style="list-style-type: none"> ○ Environmental ○ Legal ○ Privacy • Legal issues of using computer systems <ul style="list-style-type: none"> ○ GDPR ○ Hacking ○ Copyright and plagiarism 	
Key knowledge / Retrieval topics	<ul style="list-style-type: none"> • The computer as Input / Process. Output model • What input devices are • What output devices are • Assistive technologies • How the CPU works (FDE) • Different types of memory (RAM / ROM) • What software is • Operating system Software • Utility Software <ul style="list-style-type: none"> ○ Anti-virus ○ Back-up ○ System management ○ File management • Application Software <ul style="list-style-type: none"> ○ Types of ○ Appropriate uses of 	<ul style="list-style-type: none"> • ROM / RAM / CACHE <ul style="list-style-type: none"> ○ Differences ○ Purposes ○ Benefits • Secondary Storage <ul style="list-style-type: none"> ○ Different types <ul style="list-style-type: none"> ▪ Magnetic ▪ SSD ▪ Optical ○ Characteristics and uses ○ Appropriate type for particular purpose • Application software <ul style="list-style-type: none"> ○ Types ○ Appropriate use ○ Which to use for a particular purpose 	<ul style="list-style-type: none"> • What are computers made of? <ul style="list-style-type: none"> ○ Plastics ○ Rare poisonous metals • How are they disposed of? • Pollution • Impact on Climate Change • What can we do? • The need for Laws on use • What laws are designed to do • GDPR <ul style="list-style-type: none"> ○ Privacy ○ Protecting data • Computer Misuse Act <ul style="list-style-type: none"> ○ Black / White Hat Hacking ○ Other miss-use <ul style="list-style-type: none"> ▪ Damaging equipment ▪ Destroying / changing data • Copyright laws, <ul style="list-style-type: none"> ○ Creative commons licence ○ Legal use ○ Plagiarism 	

<p>Understanding / Sequence of delivery</p>	<ul style="list-style-type: none"> • Know what a computer is (Input / process / output / storage) • Difference between Hardware and Software • Input / Output storage devices • Internal components (CPU, Motherboard/RAM/BIOS/disks) • Peripherals and functions (camera, keyboard, printer, mic, mouse, scanner, headphones, speakers, printer) and function • Operating System, what they are what they do • management of software • management of hardware (drivers) • management of CPU and memory • Utilities e.g • backup • disk management • system management • antivirus" 	<ul style="list-style-type: none"> • Computer Memory and Storage • ROM/RAM/Cache • Secondary Storage, use and purpose • Magnetic / Solid State / Optical, characteristics and use • Identify appropriate storage given circumstance" • Identify a range of application software and use <ul style="list-style-type: none"> • image processing • Word Processing • Spreadsheet • Web browsers • Presentation • Database • IDE 	<ul style="list-style-type: none"> • Moral - replacing humans / changing the world / spreading information and privacy • Legal - hacking / GDPR / Copyright - understanding laws exist that affect and control computer use • State the purpose of the following <ul style="list-style-type: none"> • GDPR • Computer Misuse Act • Copyright, Designs and Patents act • Environmental Issues - recycling and waste / energy use / improvements in manufacturing Open source - cost differences / support / customisation Introduction to python. Using Turtle to develop: <ul style="list-style-type: none"> Basic programming concepts <ul style="list-style-type: none"> ○ Sequence ○ Selection ○ Iteration
<p>Assessments</p>	<ul style="list-style-type: none"> • CAT1 – The basics of what a computer is. • Homework 	<ul style="list-style-type: none"> • Low stakes testing • CAT2 – Computer Basics, storage and applications • Homework 	<ul style="list-style-type: none"> • Low stakes testing • Homework • End of year PPE based on OCR Entry Level assessment