Fairfield High School Curriculum Overview – Years 7

Subject	**Computer Science**	**Why do we study these units in Year 7?**
Taught per fortnight	2	Year 7 in Computer Science begins with building the essential digital skills that support learning across all subjects. Students are introduced to platforms such as Microsoft Teams and Classcharts, which they will use to manage homework, assignments, timetables, and feedback. Alongside this, they begin exploring how to communicate clearly and effectively through digital media, creating posters, logos, and presentations on an environmental issue of their choice. Students are introduced to core computer science concepts: how networks connect from simple signals to the Internet, how to model data effectively using spreadsheets, and how to develop problem-solving skills through programming with Scratch. By the end of Year 7, students will have gained a strong foundation in digital literacy, creative media, and computational thinking; skills that are vital both for their future studies in Computer Science and for success across the wider curriculum.
Setting	Mixed ability teaching in tutor groups	

Students are encouraged to be Responsible Global Citizens through numerous links to the sustainable development goals embedded within the curriculum. Projects such as creating digital media to raise awareness of environmental issues, with clear links to the UN Sustainable Development Goals embedded in lessons.
We ensure all students experience high challenge by differentiated programming tasks in Scratch, open-ended spreadsheet modelling, and extension activities in networking concepts to stretch all learners.
Literacy work includes the introduction of a wide range of computing vocabulary, including terms related to programming, networks, data modelling, and digital media.
Innovation and Creativity opportunities within digital media design tasks, branding and campaign work, and through workshops delivered by local universities and employers.
Employability opportunities and skills are developed through collaboration, problem-solving in programming, project-based tasks, and clear communication in digital media, all supplemented by external workshops and trips.

Term	Unit title	Knowledge and Understanding/content	Skills	Assessment
1	**Introduction, Office 365 & Classcharts, Clear Messaging in Digital Media (posters, logos)**	Understand how to use Microsoft Teams and Classcharts for managing learning. Learn the principles of clear messaging in digital media. Introduction to design principles when creating posters and logos.	• Use Office 365 tools effectively for homework/assignments. • Navigate Classcharts. • Apply design principles in creating posters and logos.	**Baseline Assessment** **Practical project: poster/logo design.** **Evaluation, self-assessment & peer feedback**
2	**Clear Messaging in Digital Media (slides, branding on environmental issues**	Explore how digital media is used to communicate a message. Learn branding basics and persuasive techniques. Understand environmental issues as a context for digital communication.	• Create slides with effective layout and design. • Apply branding techniques. • Communicate ideas clearly using digital tools.	**Practical project: presentation and branding materials on an environmental issue.** **Teacher assessment & feedback**
3	**Networks – From Semaphores to the Internet**	Define protocols and networks. Understand how data is transmitted across networks. Explore network hardware, wired vs wireless connections, and bandwidth. Learn about the Internet, World Wide Web, protocols, packets, and addressing.	• Explain how networks and the Internet function. • Compare networking methods. • Use correct terminology (protocol, packets, bandwidth, connectivity). • Evaluate how connected devices impact everyday life.	**Written assessment (key terms and concepts).** **Short project on how the Internet works.**
4	**Programming Essentials in Scratch**	Understand sequences, variables, conditions, selection, and iteration. Learn how computers process input, process, and output. Explore debugging and designing simple programs.	• Create and modify programs in Scratch. • Use variables, selection, and iteration.	**Practical programming project in Scratch.** **Debugging and design task.**

			• Debug programs. Independently design and implement solutions using programming constructs.	
5	**Modelling Data using Spreadsheets**	Learn spreadsheet structure (cells, rows, columns). Use formulas and functions (SUM, MAX, MIN, AVERAGE, COUNTIF, IF). Understand data vs information. Analyse and present data using charts	• Perform calculations using spreadsheets. • Sort, filter, and format data. Create and interpret charts. • Analyse data sets effectively. • Apply spreadsheet functions and conditional formatting.	**Practical assessment: create a working spreadsheet model and analyse data.**
6	**Using Media – Gaining Support for a Cause**	Understand the features of word processors and digital publishing. Learn about Creative Commons, licensing, and plagiarism. Evaluate credibility of online sources. Explore blog construction and content organisation.	• Format documents effectively. • Select credible sources and reference appropriately. • Apply digital literacy skills in designing a blog. • Organise content for audience impact	**Practical project: create a blog on a chosen cause, demonstrating formatting, sourcing, and referencing.**