Computer Science – Year 7   Long-Term Plan 2024-2025

Fairfield High School for Girls

Calendar	Topic	Assessment	Sequencing and Coherence *concepts - themes - skills*	Literacy *reading - vocabulary - oracy - writing*
Autumn **Half Term 1**	**Unit 1 Using Computers Safely and Effectively:** • File management • Social Networking • Keeping data safe • Using email • Searching the web	Whole school Exam window on unit topics with feedback from the exam. Next steps time to review knowledge gaps.	Knowledge and skills to begin using computers – checks pupils understanding and keeps them safe on starting at Fairfield. **NC threads:** • Impact of tech • Safety and security	Knowledge organisers including glossaries Oracy opportunities within discussions Reading task given at the end of the unit.
Autumn **Half Term 2**	**Unit 2 Managing Online Safety:** • Managing Online information		Safe use of computers and tech online As pupils increase their online presence, we cover methods to stay safe. **NC Thread:** • Impact of technology • Safety and Security	Knowledge organisers including glossaries Oracy opportunities within discussions Reading task given at the end of the unit.
Spring **Half Term 3**	**BEBRAS Challenge**	The Bebras Challenge introduces computational thinking to students worldwide. Each participant has 45 minutes to tackle a series of interactive tasks, designed to encourage logical thinking and problem-solving skills appropriate for their age group. Students don't need to excel in maths or computing to take part in the Bebras Challenge. The tasks are designed to allow every student the opportunity to showcase their potential.		
	Unit 3 Physical Computing Micro:Bit: • Hello World • Bare Bones • Connections • Further Programming	Assessment with a final pupil created program. The assessment looks at skills used and gives a BCDM level for pupils and allows pupils to self-evaluate.	**Unit 3 Physical Computing Micro:Bit:** • Hello World • Bare Bones • Connections • Further Programming	Assessment with a final pupil created program. The assessment looks at skills used and gives a BCDM level for pupils and allows pupils to self-evaluate.

Spring **Half Term 4**	**Unit 4 Understanding Computers:** • Elements of a computer • The CPU • Understanding Binary		Key principles of what a computer is following practical units that have engaged the interest, this unit gives a background of what a computer is and the base to build on for theory, links to computer systems learnt practically on a Micro Bit. **NC Thread:** • Creating Media • Computer systems • Computer Networks • Design and Development	Knowledge organisers including glossaries Oracy opportunities within discussions
Summer **Half Term 5**	**Continue...** **Unit 4 Understanding Computers:** • Binary Addition • Storage Devices • New Technology	Full end of year Assessment covering all units covered so far in the year. Marks will be issued with Next steps feedback	Key principles of what a computer is following practical units that have engaged the interest, this unit gives a background of what a computer is and the base to build on for theory, links to computer systems learnt practically on a Micro Bit. **NC Thread:** • Creating Media • Computer systems • Computer Networks • Design and Development	Knowledge organisers including glossaries Reading task given at the end of the unit. Oracy opportunities within discussions
Summer **Half Term 6**	**Unit 5 Lego Project:** • Explore and Communicate • Rescue Robot • Pipeline Solutions – sensors • Exploring Motors	Assessment is of the final program to solve the Lego missions.	Unit giving pupils design opportunities to plan and build solutions in teams to use programming skills and work as teams. **NC thread:** • Algorithms • Programming • Computer Systems • Effective Use of Tools • Data and Information	Knowledge organisers including glossaries Presentation of ideas to audience Oracy opportunities within discussions, paired programming oracy to develop problem solving skills.