

## Year 7 IT and Computer Science

The Year 7 curriculum is split up in four topics, two IT and two Computing. The topics taught are a combination of knowledge and other important key skills.

- Computer and Office Skills - this topic contains a variety of general computer-based skills to accommodate for students having a varying amount of previous computer experience (some have only used tablets prior to this)
- Block programming builds practical coding skills and logical thinking, extends students' exposure to computing at primary school
- Understanding Computers – an introduction to the fundamentals of how computers are made and how they work. Introduction to some topics in GCSE Computer Science.
- Game and Project Design – an introduction to a project lifecycle approach to for a task, this further develops logic and programming skills.

Methods of deepening and securing knowledge:	
Retrieval practice	Starter activities are used whilst students login to computers, these are knowledge retrieval activities.
Interleaving	Programming skills are revisited several times in Year 7. Key concepts are repetitively covered using different language and are interleaved within the curriculum.
Concrete examples	Concrete examples are used as the teacher demonstrates completed projects or tasks in creative or practical lessons to demonstrate how the skills taught can be applied to different scenarios.
Dual coding	Dual coding is used as instructions for tasks include written steps and images showing what icons or tools look like.

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
Topic(s)	<b>Computer and Office Skills</b> - GSuite Training (Classroom/ Google Drive) - Office Skills (Word Processing/ Publisher/ Spreadsheet) - E-Safety	<b>Block Programming</b> - Programming with Scratch Bebras Challenge	<b>Block Programming /Understanding Computers</b> - Programming with BBC Microbits - Hardware - Computer components - Binary numbers	<b>Understanding Computers</b> - Binary and text systems (ASCII) - Logic circuits (simple boolean logic and its uses in circuits and programming) - Computer security (understanding a range of ways to use technology)	<b>Game and Project Design</b> - Programming and 3D game creation - Planning, designing projects	<b>Game and Project Design</b> - Implementing, testing and evaluating game projects

				safely, respectfully, responsibly and securely)		
Assessment	- Baseline assessment	- Assessment on computer/office skills and some block programming	- Small block programming assessment	- Understanding computers assessment		- Assessment on all Year 7 topics
CEIAG <i>(where appropriate to link to careers in the topic)</i>	Business Administration, Finance	Computer Programming, Software Developer	Computer Programming, Software Developer	Computer Scientist Cyber Security	Game Developer	Game Developer