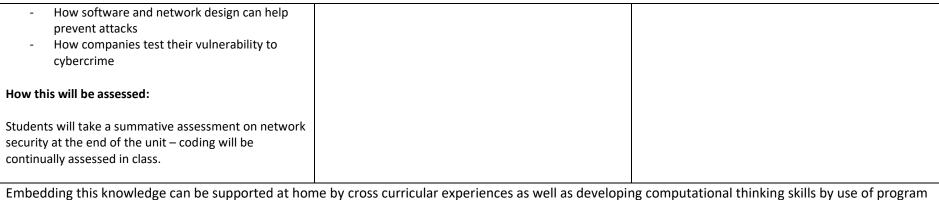


## Year 11LONG-TERM SEQUENCE for ICT/Computing



The GCSE curriculum has been developed to instil a solid foundation in both the practical programming aspects of computer science, and the conceptual theory too. Students are given ample opportunity for practical work both individually and in pairs to maximise their exposure to writing and debugging code, giving students the skills to further their coding ability through further study or individually.

code, giving students the skills to further their coding ability through further study or individually.		
Half Term 1:	Half Term 2	Half Term 3
Strand A - Programming part 6: Dictionaries and data files:	Strand A - Programming part 6: Dictionaries and data files:	Strand A – Continuous Python programming: STUDENTS MUST KNOW:
STUDENTS MUST KNOW:	STUDENTS MUST KNOW:	<ul> <li>How to use all previously taught</li> </ul>
- Why the record and dictionary data structures	<ul> <li>How to read and write to and from a file in</li> </ul>	programming constructs to write and
are useful in programming	Python	interpret programs
- How to write Python programs to initialise and	- How to structure and plan a large program	
utilise records and dictionaries	- How to combine all previous knowledge in	Strand B – Databases and SQL:
Character B. Markovandari	Python to write a complex program	STUDENTS MUST KNOW:
Strand B – Networks: STUDENTS MUST KNOW:	Strand B – Impacts of Technology:	<ul> <li>The structure and parts of flat file and relational databases</li> </ul>
- What computer networks are including	STUDENTS MUST KNOW:	- How to structure and write SELECT, UPDATE,
common hardware and topologies	- The laws and regulations surrounding	INSERT, and DELETE queries in SQL
How data is transmitted through both wired	technology and data	- How to interpret written questions to
and wireless mediums	- The cultural, ethical, and environmental	produce relevant SQL queries
- The different protocols used throughout	impacts of technology	
networks with in-depth look at TCP	- How to write balanced arguments for or	
	against technological topics	How this will be assessed:
How this will be assessed:		
	How this will be assessed:	Students will sit a test on databases and SQL queries –
Students will take a summative assessment analysing		coding will be continually assessed in class.
and writing code snippets at the end of the unit and a	Students will produce a large piece of code and sit an	
test on networks.	assessment on the impacts of technology.	
Half Term 4	Half Term 5	Half Term 6
Strand A – Continuous Python programming:	Revision:	Revision:
STUDENTS MUST KNOW:		
<ul> <li>How to use all previously taught programming</li> </ul>	Key topics will be revisited with students in preparation	Key topics will be revisited with students in
constructs to write and interpret programs	for the GCSE exams.	preparation for the GCSE exams.
Strand B - Network Security:		
STUDENTS MUST KNOW:		
- The potential threats posed to networks from		
cybercriminals		



Embedding this knowledge can be supported at home by cross curricular experiences as well as developing computational thinking skills by use of program such a IDLE Visual studio code.

Codeacademy and code.org are also fun and challenging for anyone wanting to develop their programming skills