

	Year 11 Computer Science					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content (max 5)	How can we design programs that solve problems effectively, efficiently, and reliably? 1. Programming fundamentals 2. Advanced programming techniques 3. Producing robust programs	How can computer systems be kept secure, reliable and fair while protecting the people who use them? 1. Network threats & security 2. Systems software 3. Ethical, Legal, Cultural & environmental concerns	How do computers use logic, programming languages, and development tools to solve real-world problems efficiently and accurately? 1. Boolean Logic 2. Programming languages 3. IDEs	Recapping of content in preparation for exams 1. Systems Architecture 2. Memory & Storage 3. Networks 4. Algorithms 5. Programming Fundamentals	Recapping of content in preparation for exams 1. Network security 2. Systems software 3. Ethical, legal, cultural & environmental impacts of digital technology 4. Boolean Logic	Exams
Vocabulary (max 10)	1. Variables 2. Constants 3. Sequence 4. Selection 5. Iteration 6. Array 7. SQL 8. Concatenation 9. Functions 10. Procedures	1. Malware 2. Social engineering 3. Denial of service 4. Data interception 5. Firewall 6. Encryption 7. Defragmentation 8. Compression 9. Legislation	1. Logic 2. Operators 3. Compiler 4. Interpreter 5. IDE (Integrated Development Environment) 6. Translators 7. Diagnostics	1. CPU 2. Cache 3. RAM 4. ROM 5. Virtual Memory 6. Topology 7. Bandwidth 8. Functions 9. Arrays 10. Debugging	1. Firewall 2. Encryption 3. Authorisation 4. Malware 5. Operating system 6. Privacy 7. Digital divide 8. Data protection 9. Logic gates 10. Artificial Intelligence	Exams
Catholic Link	Human Dignity	Stewardship Rights & Responsibilities	Stewardship Common Good	Truth and Justice	Stewardship Rights & Responsibilities	
Careers Link	Games developer, Cybersecurity Analyst	Network security engineer, Data Protection officer	Hardware engineer, App developer	Software tester	Software tester, Penetration tester (Ethical hacker)	

Ways to enrich the year 11 curriculum at home...(max 3)

- Watch “day in the life” tech career videos
- Research a real cyber-attack. What happened? What vulnerability was exploited? How could it have been prevented?
- Debate the following questions: Should AI replace human jobs? Should companies track user data? Is hacking ever acceptable?