The Fisher Way: Curriculum

Successful and resilient learners who aspire to and achieve excellence

Confident individuals who can explore and communicate effectively

Responsible citizens who are active, loving and wise in all their endeavours

The Fisher Way aims to educate and inspire with joy, faith and love because we are an inclusive Catholic community.

Subject	Computer Science
Year Group	Year 11
Intent	**Successful and Resilient Learners**: who can analyse problems and find efficient, creative solutions for both real world situations and artificial systems **Confident Individuals:** who can use digital technology effectively, creatively and safely in their personal lives and future careers **Responsible Citizens:** who understand the social and cultural impact that technology has on their lives and the lives of others.

Narrative	At KS4 Computer Science is broken in 2 elements, Computational Thinking and Computer Systems. In Year 11 the Computational Thinking elements focuses on creating and interpreting algorithms, and all learners will develop a knowledge of how to trace the run time of an algorithm with trace tables, and how to create their own algorithms using Pseudocode. The focus for Computer Systems looks at how data moves between different computers through a network, and all learners will understand the different types of networks and the hardware that goes into making them. The Computational Thinking topics will build on the work done in Y10 into collections and structured programming. Collections will be built upon when looking at how arrays are used in Searching (Binary and Linear) and Sorting (Bubble and Merge) algorithms; and structured programming will be built upon by looking at how to predict and interpret algorithms through trace tables and how structured programs can be written and/or followed in pseudocode. The Computer Systems topics will build on the work done in Y10 on Computer Components. The principles of how files and instructions are moved within a computer system will be built up when looking at how different computers can communicate transmit data through networks. Once completed, the Computational Thinking elements of the course will ensure that learners can analyse problems and find efficient, creative solutions for both real world situations and artificial systems. Once completed, the Computer Systems elements of the course will ensure that learners can use digital technology effectively, creatively and safely in their personal lives and future careers.					
Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (topics studied)	Networks Sections 1-4 - Types of Networks, Topologies, Layers and Protocols	Programming Project	Programming Project	Programming Project	Revision	
Key skills	Application of abstract topologies in real work situations, conceptualising the transfer of data through packets	Programming Project	Programming Project	Programming Project	Revision	

Cultural capital	Understanding design abstractions. Considerations of performance vs cost and balance the needs of both.	Programming Project	Programming Project	Programming Project	Revision	
Assessment	End of Unit 5 Assessment	Paper 1 and Paper 2 Hybrid Mock	Paper 1 Higher Level Questions	Paper 1 Mock and Paper 2 Mock	Past Paper and Exam Questions	