Curriculum Map 2021/2022

ST MARY'S CE HIGH SCHOOL

YEAR 7 COMPUTING

The Year 7 curriculum follows the National Curriculum strands of Digital Literacy (DL), IT (IT) and Computer Science (CS). The plan is designed to build understanding of the principles of Computing and improve IT skills with a range of activities. It challenges students to think creatively about what they are learning and how it can be applied in the real world whilst preparing them for KS4, Post 16, higher education and the wider world.

	Autumn 1a	Autumn 1b	Spring 2a	Spring 2b	Summer 3a	Summer 3b
CONTENT *Declarative / core / powerful Knowledge – 'Know What'*	Getting Started : an introduction to the school network and user area: (DL) - Introduction to logging into the school network - The process of sending and receiving emails, how to save, rename and organise files - The process of accessing the cloud and safe storage of data - Key principles of internet safety - The qualities of vector and bitmap images	Internet Safety, Cyber Security and Encryption: (DL) - Look at a range of malware and the effects of they have - What precautions to take to maintain safety online - The role of encryption in maintaining safety online - Know about a range of ciphers	Introduction to Spreadsheets: (IT) - How to write basic formulae - The concept of replication and the uses of relative and absolute cell referencing - How to name cells and ranges within a spreadsheet - How to write a range of basic functions including SUM, AVERAGE, MAX, MIN, COUNT and IF - How to use conditional formatting - How to use data in a spreadsheet to create graphs and charts	Computing Components: (CS) - The function of input and output devices - Different types of memory and storage and their use	Programming in Scratch: (CS) - How to use the concepts of sequencing, selection and iteration	Programming in Scratch: (CS) - Scratch project to design and create a game using the skills learnt in term 3a
Skills *Procedural Knowledge – 'Know How'*	• Log into the school's network proficiently • Send and receive emails successfully and safely, using appropriate language and content	Demonstrate safe practices when using the internet Use a range of ciphers and decrypt text	• Use a range of basic formulae to manipulate data • Use conditional formatting • Create graphs and charts to represent	Be able to identify the different types of input and output devices and their uses. Be able to identify the different types of storage and its uses.	To be able to create working programs in Scratch using selection, sequencing and iteration To be able to analyse the requirements of a program and to identify	To be able to create a game to meet the requirements set out in the project brief

	• Organise files and folders to facilitate ease of access and use • Demonstrate safe practices when using the Internet • Be able to create and manipulate images		different types of information		the processes needed to solve a problem	
Key Questions	Can you identify the key principles of internet safety? Can you identify the most appropriate tools to use when editing an image?	Can you identify the key ciphers and how to decrypt them? Can you list the different types of malware? What are the key precautions to maintain safety on the internet?	Can you identify the most appropriate functions to use when developing a spreadsheet for a particular purpose? Can you identify the most appropriate chart or graph to display different types of information?	Can you identify the correct input and output devices to use in a range of different situations? Can you identify the correct types of storage and when they should be used?	Can you identify the difference between selection, sequencing and iteration? Can you identify a range of problems that could affect your program?	Can you identify the needs of the project? Can you identify the importance of managing your time to complete your project?
Assessment	Mid-module assessment and end of module assessment based upon the use of the schools network, safe and appropriate use of the internet	Mid-module assessment and end of module assessment based upon using computers safely and confidently	Mid-module assessment and end of module assessment based upon using spreadsheet proficiently and how to handle data in a variety of different situations	Mid-module assessment and end of module assessment based upon input and output devices and storage devices	Mid-module assessment and end of module assessment based selection, iteration and sequencing	Final game creation