	Year 8 Computing					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content *(max 5)*	***How do the different parts of a computer work together to process information and solve problems?*** 1. Define what a computer system is. 2. Give examples of input & output devices 3. Identify a range of computer hardware 4. Explain what a CPU is and what its role is within a computer 5. Identify different types of storage and their use	***How has the development of computers changed the world we live in today?*** 1. Identify a range of early inventions in computing 2. Show an understanding of key figures such as Alan Turing and explain how code breaking contributed to the development of computing 3. Compare how computers have developed over time 4. Discuss the impact of computing on society	***How can we use Python Turtle to create patterns, shapes, and images using code?*** 1. Identify features of Python to control how the turtle moves 2. Understand the computing concepts of sequencing and iteration 3. Develop programs using loops and functions	***How is data represented and stored in computer systems?*** 1. Understand how computers use Boolean Logic & Logic gates to make decisions 2. Understand why computers use binary and convert between denary & binary numbers 3. Understand a range of data units (bit, nibble, byte, kilobyte, megabyte, gigabyte) 4. Understand how text and images are represented 5. Explain the need for compression	***How do programming concepts help us write efficient and effective Python code?*** 1. Write simple programs using a text-based programming language 2. Understand a range of data types (integer, string, float) 3. Use programming constructs such as sequencing, selection and iteration 4. Create functions to improve the efficiency of a program	***How can we use vector graphics to design clear, scalable, and effective digital images?*** 1. Identify the difference between vector and raster graphics 2. Use graphics software to create graphics such as a logo 3. Analyse how design choices improve the usability of a digital product 4. Design a vector graphic showing an understanding of design principles
Vocabulary *(max 10)* Please log into MAPPER to support your child to learn these words	1. Computer System 2. Input 3. Process 4. Output 5. Device 6. Hardware 7. CPU 8. RAM 9. Storage 10. Memory	1. Technology 2. Alan Turing 3. Enigma 4. Code 5. Cipher 6. Charles Babbage 7. Innovation 8. Evolution	1. Program 2. Code 3. Python Turtle 4. Syntax 5. Sequence 6. Iteration 7. Loop 8. Function 9. Pattern 10. Debug	1. Boolean 2. Binary 3. Denary 4. Data 5. Unit 6. Characters 7. ASCII 8. Unicode 9. Pixels 10. Compression	1. Programming 2. Syntax 3. Data type 4. Integer 5. Float 6. String 7. Sequencing 8. Selection 9. Iteration 10. Function	1. Vector 2. Raster 3. Software 4. Logo 5. Icon 6. Scalable 7. Resolution 8. Design 9. Graphics 10. Usability
Catholic Link	The Common Good – using technology to benefit society	The Common Good – how technology benefits society.	Rights & Responsibilities – careful planning & decision-making lead to positive outcomes	Solidarity & Participation – ensuring information can be accessed and shared fairly and responsibly.	The Common Good – solving problems	The Common Good – creating products that are accessible and useful for everyone.
Careers Link	IT support technician, Hardware engineer	Software engineer, History teacher	App developer,	Data Analyst, Software engineer	Software developer, Games developer	Graphic designer, Illustrator

Ways to enrich the year 8 curriculum at home…

- *Watch the film "The Imitation Game"*
- *Create a quiz to test someone else on the different parts of a computer*
- *Create your own 'code' and get someone else to break it*