	Year 9 Computing					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content	***How can we protect ourselves and our data in an increasingly digital world?*** 1. Explain what cyber security is and why it is important in the digital world. 2. Describe examples of cyber security in everyday life. 3. Examine the impact of cyber-attacks on individuals.	***How can we design, build, and improve Python programs to solve real-world problems?*** 1. Identify key programming concepts - variables, data types, input/ output, and basic syntax 2. Use selection and iteration within programs 3. Test, debug and evaluate programs	***How is artificial intelligence changing the way we live, work, and make decisions?*** 1. Describe what artificial intelligence is. 2. Explain examples of AI in everyday life. 3. Explore how AI systems are trained. 4. Evaluate the benefits and risks of AI	***How can we use spreadsheets to organise, analyse, and interpret data to solve problems?*** 1. Identify the key features of spreadsheets 2. Use formulas and functions to process data 3. Manipulate data using sorting, filtering and charts 4. Design a spreadsheet to solve a real-world problem	***How do computer networks allow devices to communicate and share data securely?*** 1. Describe what a computer network is 2. Identify a range of networking hardware 3. Explain how data is transmitted across networks 4. Compare different types of networks	***How can we design and control automated systems using flowcharts?*** 1. Identify the key flowchart symbols 2. Construct simple flowcharts to control devices 3. Use selection and iteration within a flowchart 4. Test, debug and evaluate Flowol programs
Vocabulary Please log into MAPPER to support your child to learn these words	1. Cyber security 2. Malware 3. Phishing 4. Encryption 5. Passwords 6. Network 7. Firewall 8. Data protection 9. Social engineering 10. Privacy	1. Program 2. Variable 3. Sequence 4. Selection 5. Iteration 6. Loop 7. Function 8. Debugging 9. Data type	1. Artificial Intelligence 2. Algorithm 3. Data 4. Machine Learning 5. Bias 6. Ethics 7. Prediction 8. Chatbot	1. Spreadsheet 2. Cell 3. Formula 4. Function 5. Data 6. Chart 7. Sort 8. Filter 9. Calculation 10. Model	1. Network 2. LAN 3. WAN 4. Router 5. Ethernet 6. Fibreoptic 7. Server 8. Client 9. Bandwidth 10. Wireless	1. Flowchart 2. Algorithm 3. Sequence 4. Selection 5. Iteration 6. Input 7. Output 8. Control system 9. Sensor 10. Process
Catholic Link	The Common Good – solving problems	Rights and Responsibilities – Right to privacy and a responsibility to protect their own and others' data.	Stewardship – AI should be used responsibly, ensuring fairness and avoiding harm or bias.	Stewardship – Using data responsibly to make good decisions	The Common Good – Networks connect people and allow sharing of information globally.	Rights and Responsibilities – decisions should be fair and responsible.
Careers Link	Games developer, Data Analyst	Cyber security analyst, Ethical hacker	Data Scientist, AI developer	Accountant, Finance Officer	Network engineer, IT support technician	Project manager, Software developer

Ways to enrich the year 9 curriculum at home…

- Complete a range of Python activities using Code.org
- Create a personal budget spreadsheet
- Watch "The Thinking Game" film