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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7 (IT)	**7.1 Presentations** **Year 7 Dashboard** Year 7 - The Catholic High School (fireflycloud.net) **Introduction to Computer Science and applications software** Look how our systems work, what you need to know to be able to use our computer systems and assessing what we already know about the topic of computing. Also looking at school computers and personal devices and how to use these responsibly and safely. **Introduction to network, Firefly, Microsoft Office** Presentation software used to talk about yourself. This is an opportunity to show your talent whilst learning presentation skills, presentation skills can be used both personally and professionally	**7.2 Word-processing** **Year 7 Dashboard** Year 7 - The Catholic High School (fireflycloud.net) **Word-processing** Build skills on how to word process, whilst understanding implications of Copyright Look at the reasons and benefits word processing are used personally and professionally whilst remaining within the Law	**7.3 Representing Images** **Year 7 Dashboard** Year 7 - The Catholic High School (fireflycloud.net) A series of lessons looking at how mages are represented in digital form, Students will learn about different images formats and how to use and apply each in different scenarios.	**7.4 Finance Spreadsheets** **Year 7 Dashboard** Year 7 - The Catholic High School (fireflycloud.net) A series of lessons designed to build skills on basic formulae, functions whilst understanding implications of cost control in order to manage finances personally and professionally, Students will also learn a range of ways of presenting information.	**7.5 Web Project** **Year 7 Dashboard** Year 7 - The Catholic High School (fireflycloud.net) Building an interactive website using an online platform in order to see how the digital world has impact on personal and professional circumstances	**7.6 E-Safety Graphics** **Year 7 Dashboard** Year 7 - The Catholic High School (fireflycloud.net) How do we stay safe in a digital world that impacts so much of our personal and professional lives? Whist building on graphic developmental skills
	Assessment: R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3. Year 7 Exam

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Literacy Focus	Capitalisation Capitalisation - The Catholic High School (fireflycloud.net)	Organisation Organisation - The Catholic High School (fireflycloud.net)	Punctuation Punctuation - The Catholic High School (fireflycloud.net)	Spelling Spelling - The Catholic High School (fireflycloud.net)	Vocabulary Tier 3 Vocabulary - The Catholic High School (fireflycloud.net)	Bring it all together Literacy in Computer Science and ICT - The Catholic High School (fireflycloud.net)
Revision	**Use of school network**	**Cornell Notes**	**Mind maps**	**Flash Cards**	**Bringing it all together**	**Reflection**
Year 8 (Computer Science)	**8.0** **Introduction to the new systems.** Introducing Office 365. Using basic office skills and what applications are for. **8.1** **Algorithms and programming.** Introduction to what algorithms are, how to write them using flowcharts and pseudo code. Using Python Turtle to create shapes. Learning basic programming constructs of sequence, selection, and iteration. Learning the basics of modular programming.	**8.1 Cont.** **Algorithms and Programming** Introduction to what algorithms are, how to write them using flowcharts and pseudo code. Using Python Turtle to create shapes. Learning basic programming constructs of sequence, selection, and iteration. Learning the basics of modular programming.	**8.2** **Data Representation** Learning how computers represent data. Including: • Binary • Hexadecimal • Images • Sound • Boolean Logic • Truth Tables Creating and manipulating digital images using Photoshop.	**8.2 Cont.** **Data Representation** Learning how computers represent data. Including: • Binary • Hexadecimal • Images • Sound • Boolean Logic • Truth Tables Creating and manipulating digital images using Photoshop.	**8.3** **How the web works** Looking at networks, the internet and how web pages work Using HTML and CSS to create web pages. Also includes internet security and E-Safety	**8.3 Cont.** **How the web works** Looking at networks, the internet and how web pages work Using HTML and CSS to create web pages. Also includes internet security and E-Safety
	Assessment: R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Self-Assessment Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3. Programming	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.	**Assessment:** R and R Exercise ½ way through the unit (MS Forms) End of Unit Assessment (MS Forms) ICT Skills and use of school network Digital Product Attainment Bands 1, 2 and 3.
Literacy Focus	**Capitalisation**	**Organisation** Organisation - The Catholic High School (fireflycloud.net)	**Punctuation** Punctuation - The Catholic High School (fireflycloud.net)	**Spelling**	**Vocabulary**	**Bring it all together**

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	Capitalisation - The Catholic High School (fireflycloud.net)			Spelling - The Catholic High School (fireflycloud.net)	Tier 3 Vocabulary - The Catholic High School (fireflycloud.net)	Literacy in Computer Science and ICT - The Catholic High School (fireflycloud.net)
Revision	**Note taking**	**Use of ICT/podcasts**	**Mind maps**	**Memory techniques**	**Exam questions**	
Year 9 (Digital Literacy and Next Steps)	**9.1: Project 1 Interactive Digital Media (IDM) (Computer Science)** Students will undertake three projects over the course of the school year based on the national curriculum recommendations for computer science. The three strands addressed are: • Computer Science • Digital Literacy • Information Technology This is applied across computer science, ICT and will also include 'real world' application to business and the world of work. Project 1 requires the students to design, create and evaluate a piece of Interactive Digital Media (IDM) using Microsoft PowerPoint. The topic is drawn from the NC requirements for students to learn about safe, secure use of computer systems and the basic principles of how computer networks operate.	**9.1: Project 1 Interactive Digital Media (IDM) (Computer Science)** For 2021 only we are putting in a number of programming lessons for Year 9 to address some of the gaps left in not accessing computers in Year 8. This will be taken from 8.1 **9.2 Multimedia/ Digital Marketing (may start after Christmas) due to above**	**9.2 Multimedia/ Digital Marketing (may start after Christmas) due to additional programming** Project 2 requires the students to look at the application of technology in an E-Sports company and to create an ethical marketing. Students will also learn about Boolean Logic. The student will create a range of digital products and will for 2021 do a small piece of programming/scripting to address gaps for Year 8.	**9.2 Multimedia/ Digital Marketing (may start after Christmas) due to additional programming** Students will complete project 9.2 with some additional web-based scripting. .	**9.3 Computer Science, Information Technology and Digital Literacy in society.** The emphasis of this unit is to combine, recall and retrieve knowledge, skills and understanding from Year 7, 8 and 9. There will be opportunities for students to reflect on opportunities to apply computer science, information technology and digital literacy. The focus will be on the use of multiple software platforms and combining these to create solutions based on given scenarios applied to education, work, and leisure. Introduction to a wider range of software as part of the school IT system	**9.3 Computer Science, Information Technology and Digital Literacy in society.** The emphasis of this unit is to combine, recall and retrieve knowledge, skills and understanding from Year 7, 8 and 9. There will be opportunities for students to reflect on opportunities to apply computer science, information technology and digital literacy. The focus will be on the use of multiple software platforms and combining these to create solutions based on given scenarios applied to education, work, and leisure.

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Year 10 CS	**1.1 Systems Architecture** •The purpose of the CPU: The fetch-execute cycle •Common CPU components and their function: ALU, CU, Cache, Registers •Von Neumann architecture: MAR, MDR, Program Counter, Accumulator •How common characteristics affect their performance: Clock speed, cache size, number of cores •The purpose, characteristics, and examples of embedded systems **Programming**	**1.2 Memory and Storage – Data Representation** •The units of data storage: Bit, Nibble, Byte, Kilobyte, Megabyte, Gigabyte, Terabyte, Petabyte •How data needs to be converted into a binary format to be processed by a computer •Data capacity and calculation of data capacity requirements •How to convert positive denary whole numbers to binary (up to and including 8 bits) and vice versa •How to add two binary integers together (up to and including 8 bits) and explain overflow errors that may occur •How to convert denary whole numbers into 2-digit	**1. Memory and Storage - Hardware** •The need for primary storage •The difference between RAM and ROM •The purpose of ROM in a computer system •The purpose of RAM in a computer system •Virtual memory •The need for secondary storage •Common types of storage: Optical, Magnetic, Solid-state •Suitable storage devices and storage media for a given application •The advantages and disadvantages of different storage devices and storage media relating to these characteristics: Capacity, Speed, Portability, Durability, Reliability, Cost	**1.3 Computer Networks** •The Internet as a worldwide collection of computer networks: DNS, Hosting, The Cloud, Web servers and clients •Star and Mesh network topologies •Modes of connection: Wired (Ethernet), Wireless (Wi-Fi, Bluetooth) •Encryption •IP addressing and MAC addressing •Standards	**1.5 Systems Software** •The purpose and functionality of operating systems: User interface, Memory management and multitasking, Peripheral management and drivers, User management, File management •The purpose and functionality of utility software •Utility system software: Encryption software, Defragmentation, Data compression	**1.6 Ethical, legal, cultural, and environmental aspects** •Impacts of digital technology on wider society including Ethical issues, Legal issues, Cultural issues, Environmental issues, Privacy issues •Legislation relevant to Computer Science: The Data Protection Act 2018, Computer Misuse Act 1990, Copyright Designs and Patents Act 1998 •Software licences (i.e., open-source and proprietary) **Programming**

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			1.3 Computer Networks	•Common protocols including TCP/IP, HTTP, HTTPS, FTP, POP, IMAP, SMTP	**Programming**	
		hexadecimal numbers and vice versa •How to convert binary integers to their hexadecimal equivalents and vice versa •Binary shifts •The use of binary codes to represent characters and the term 'character set' •The relationship between the number of bits per character in a character set, and the number of characters which can be represented, e.g.: ASCII, Unicode •How an image is represented as a series of pixels, represented in binary and what image metadata is •The effect of colour depth and resolution on the quality of the image, The size of an image file •How sound can be sampled and stored in digital form •The effect of sample rate, duration and bit depth on the playback quality, The size of a sound file •The need for compression •Types of compression: Lossy, Lossless **Programming**	•Types of networks: LAN, WAN •Factors that affect the performance of networks •The different roles of computers in a client-server and peer-to-peer network •The hardware needed to connect stand-alone computers to a LAN: Wireless access points, Routers, Switches, NIC, Transmission media **Programming**	•The concept of layers **1.4 Network Security** •Forms of attack: Malware, Social engineering (e.g., phishing, people as the 'weak point'), Brute-force attacks, Denial of service attacks, Data interception and theft, The concept of SQL injection •Common prevention methods: Penetration testing, anti-malware software, Firewalls, User access levels, Passwords, Encryption, Physical security **Programming**		
	Assessment: End of unit tests	**Assessment:** End of unit tests Programming diary	**Assessment:** End of unit test Programming diary	**Assessment:** End of unit test Programming diary	**Assessment:** End of unit test Programming diary	**Assessment:** End of unit test Programming diary
Literacy Focus	**Capitalisation** Capitalisation - The Catholic High School (fireflycloud.net)	**Organisation** Organisation - The Catholic High School (fireflycloud.net)	**Punctuation** Punctuation - The Catholic High School (fireflycloud.net)	**Spelling** Spelling - The Catholic High School (fireflycloud.net)	**Vocabulary** Tier 3 Vocabulary - The Catholic High School (fireflycloud.net)	**Bring it all together** Literacy in Computer Science and ICT - The Catholic High School (fireflycloud.net)

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Revision	Workbooks	www.youtube.com (CnD)	Cornell Notes	Mind mapping	Flashcards	Web-based resources
Year 11CS	**2.1 Algorithms** •Principles of computational thinking: Abstraction, Decomposition, Algorithmic thinking •Identify the inputs, processes, and outputs for a problem •Structure diagrams •Create, interpret, correct, and refine algorithms using: Pseudocode, Flowcharts, Reference language/high-level programming language •Identify common errors •Trace tables •Standard searching algorithms: Binary search, Linear search •Standard sorting algorithms: Bubble sort, Merge sort, Insertion sort **Programming**	**2.2 Programming fundamentals** •The use of variables, constants, operators, inputs, outputs, and assignments •The use of the three basic programming constructs used to control the flow of a program: Sequence, Selection, Iteration (count and condition-controlled loops) •The common arithmetic operators •The common Boolean operators AND, OR and NOT •The user of data types: Integer, Real, Boolean, Character and string, Casting •The use of basic string manipulation •The use of basic file handling operations: Open, Read, Write, Close •The use of records to store data •The use of SQL to search for data •The user of arrays (or equivalent) when solving problems, including both one-dimensional and two-dimensional arrays •How to use subprograms (functions and procedures) to produce structured code •Random number generation	**2.3 Producing robust programs** •Defensive design considerations: Anticipating misuse, Authentication •Input validation •Maintainability: Use of subprograms, naming conventions, Indentation, Commenting •The purpose of testing •Types of testing: Iterative, Final/terminal •Identify syntax and logic errors •Selecting and using suitable test data: Normal, Boundary, Invalid, Erroneous •Refining algorithms	**2.4 Boolean Logic** •Simple logic diagrams using the operations AND, OR and NOT. •Truth tables. •Combining Boolean operators using AND, OR and NOT to two levels. •Applying logical operators in appropriate truth tables to solve problems.	**2.5 Programming Languages and IDEs** •Characteristics and purpose of different levels of programming language: High-level languages, Low-level languages •The purpose of translators •The characteristics of a compiler and an interpreter •Common tools and facilities available in an IDE: Editors, Error diagnostics, Run-time environment, Translators	STUDY LEAVE

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		Programming				
	Assessment: End of unit test Programming diary	Assessment: End of unit test Programming diary	Assessment: End of unit test	Assessment: End of unit test	Assessment: End of unit test	
Literacy Focus	**Capitalisation** Capitalisation - The Catholic High School (fireflycloud.net)	**Organisation** Organisation - The Catholic High School (fireflycloud.net)	**Punctuation** Punctuation - The Catholic High School (fireflycloud.net)	**Spelling** Spelling - The Catholic High School (fireflycloud.net)	**Vocabulary** Tier 3 Vocabulary - The Catholic High School (fireflycloud.net)	**Bring it all together** Literacy in Computer Science and ICT - The Catholic High School (fireflycloud.net)
Revision	**Workbooks**	**Online Resources (Firefly Usage)**	**Cornell Notes**	**Mind mapping**	**Flash cards**	**Web-based resources**

Year 10 IT/DL	**R081 - Pre-Production Skills (0.2)** **R082 - Creating Digital Graphics (0.4)** **R088 - Creating Digital Sound Sequence (0.4)**	**R081 - Pre-Production Skills (0.2)** **R082 - Creating Digital Graphics (0.6)** **R088 - Creating Digital Sound Sequence (0.4)**	**R081 - Pre-Production Skills (0.2)** **R082 - Creating Digital Graphics (0.6)** **R088 - Creating Digital Sound Sequence (0.4)**	**R081 - Pre-Production Skills (0.2)** **R082 - Creating Digital Graphics (0.6)** **R088 - Creating Digital Sound Sequence (0.4)**	**R081 - Pre-Production Skills (0.2)** **R082 - Creating Digital Graphics (0.6)** **R088 - Creating Digital Sound Sequence (0.4)**	**R081 - Pre-Production Skills (0.2)** **R085 Creating a Multiple Webpage (0.6)** **R088 - Creating Digital Sound Sequence (0.4)**
	Assessment: Mark scheme (controlled)	Assessment: Mark scheme (controlled) Exam questions (booklet)	Assessment: Mark scheme (controlled) Exam questions (booklet)	Assessment: Mark scheme (controlled) Exam questions (booklet)	Assessment: Mark scheme (controlled) Exam questions (Full exam)	Assessment: Mark scheme (controlled) Exam questions (booklet)
Literacy Focus	**Capitalisation** Capitalisation - The Catholic High School (fireflycloud.net)	**Organisation** Organisation - The Catholic High School (fireflycloud.net)	**Punctuation** Punctuation - The Catholic High School (fireflycloud.net)	**Spelling** Spelling - The Catholic High School (fireflycloud.net)	**Vocabulary** Tier 3 Vocabulary - The Catholic High School (fireflycloud.net)	**Bring it all together** Literacy in Computer Science and ICT - The Catholic High School (fireflycloud.net)
Revision	**Workbooks**	**Online Resources (Firefly Usage)**	**Cornell Notes**	**Mind mapping**	**Flash cards**	**Web-based resources**

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						STUDY LEAVE
Year 11 IT/DL	**R081 - Pre-Production Skills (0.4)** **R085 Creating a Multiple Webpage (0.6)** Much of this academic year will be focused on individual support plans based on the individual needs of students to address what was missed during school closure and absences.	**R081 - Pre-Production Skills (0.4)** **R085 Creating a Multiple Webpage (0.6)**	**R081 - Pre-Production Skills (0.7)** **R082 - Creating Digital Graphics (0.1)** **R085 Creating a Multiple Webpage (0.6)** **R088 - Creating Digital Sound Sequence (0.1)**	**R081 - Pre-Production Skills (0.7)** **R082 - Creating Digital Graphics (0.1)** **R085 Creating a Multiple Webpage (0.6)** **R088 - Creating Digital Sound Sequence (0.1)**	**R081 - Pre-Production Skills (1)** **Coursework submitted**	
	Assessment: Mark scheme (controlled) Exam questions (booklet)	**Assessment:** Mark scheme (controlled) Exam questions (booklet)	**Assessment:** Mark scheme (controlled) Exam questions (booklet)	**Assessment:** Mark scheme (controlled) Past papers	**Assessment:** Mark scheme (controlled) Past papers	
Literacy Focus	**Capitalisation** Capitalisation - The Catholic High School (fireflycloud.net)	**Organisation** Organisation - The Catholic High School (fireflycloud.net)	**Punctuation** Punctuation - The Catholic High School (fireflycloud.net)	**Spelling** Spelling - The Catholic High School (fireflycloud.net)	**Vocabulary** Tier 3 Vocabulary - The Catholic High School (fireflycloud.net)	
Revision	**Workbooks**	**Online Resources (Firefly Usage)**	**Cornell Notes**	**Mind mapping**	**Flash cards**	