Term	Week	Focus	Summary	Learning Outcomes	Learning skills
Term 2.1	1	3.4 Computer systems	1. Memory, 2. Optical Sorage 3. Magnetic storage	Explain the workings of ROM and RAM and the impact this has on the development of a range of technological devices. Ability to describe the process of how a computer stores data on optical storage. Ability to describe the process of how a computer stores data on magnetic storage.	Collaboration, Creating
	2		1. SSD 2. Cloud storage 3. Embedded System	Summarising the advantages and disadvantages of cloud storage. Discuss the relative advantages of all storage devices. Explain what an embedded system is and how an embedded system differs from a non-embedded system.	Linking, Hardworking, Research skills
	3		Assessment and DIRT		Metathinking, Realising
	4	3.5 Fundamentals of computer networks	1. Fundamentals of Networking 2. Network types 3. Network Topologies	Define what a computer network is. Discuss the benefits and risks of computer networks. Identifying various network types and understanding their differences. Comparing wired vs wireless networks.	Linking, Hardworking
	5		Network Protocols and TCP/IP model	Define the term 'network protocol'. Explain the purpose and use of common network protocols such as: Ethernet, Wi-Fi, TCP, UDP, IP, HTTP, HTTPS, FTP, SMTP, IMAP. Describe the 4 layer TCP/IP model and explain their functioning along with related protocols	Collaboration, Creating

	6		Network Security Assessment and DIRT	Understand the need for, and importance of, network security Explain the following methods of network security: authentication, encryption, firewall, MAC address filtering.	Hardworking, Realising
Term 2.2	1	3.6 Cyber security	1. Social Engineering 2. Fundamentals of Cyber security and penetration testing 3. Malwares and types of malware	Define the term cyber security and be able to describe the main purposes of cyber security. Explain what penetration testing is and what it is used for. Explain the following forms of social engineering: blagging, phishing, shouldering Describe the following forms of malware: computer virus, Trojan, spyware.	Linking, Research skills
	2		Cyber security measures Assessment and DIRT	Understand and be able to explain the following security measures biometric measures: • password systems • CAPTCHA • using email confirmations • automatic software updates.	Collaboration, Metathinking, Realising
	3	3.7 Relational databases and structured query language	Introduction to Database and Relational Database Understanding Select query	Explain the concept of a relational database. Understand the following database concepts: • table • record • field • primary key • foreign key.	Critical thinking, Agile

4		SQL queries	Be able to use the defined SQL commands to select, insert, edit and delete data.	Critical thinking, Creating
5		Assessment and DIRT		Critical Thinking, Realising