MINISTRY OF EDUCATION

NATIONAL CENTRE FOR EDUCATIONAL RESOURCE DEVELOPMENT

NATIONAL SCHEME FOR SECONDARY SCHOOLS

GRADE 9

INFORMATION TECHNOLOGY







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Curriculum Area: Information Technology **GRADE 9**

					WEEK 1
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **What is Social and Economic Impact?** **Types of social impact.** **Types of economic impact**	Students will: Understand what is the social and economic impact.	**Social impact** Social impact may be defined as any positive or significant change that addresses or solves a social injustice or challenge. **Economic impact** It refers to the level of impact that some kind of occurrence or even has on the marketplace. It is a financial effect that something, especially something new, has on a situation or person.	Defining the term social impact. Explaining the term social impact. Defining the term economic impact. Explaining the term economic impact. Listing and explaining	Information Technology for CSEC examinations by Howard Campbell and Alan Wood pages 172-174	Home assignment.

		Types of social impact 1. Positive 2. Negative 3. Direct 4. Indirect **Types of economic impact** 1. Direct 2. Indirect 3. Induced	the types of social and economic impact.		

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					WEEK 2
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Computer security**: **Information systems**	Students will: Understand the various elements of computer security	**Computer security** - refers to the protection of hardware and software resources against accidental or deliberate damage. **Importance of computer security.** It is important as it enables people to perform their work and study. It helps in the execution of essential business processes and safeguards confidential and sensitive information. **Information Systems –** responsible for the collection, processing, and overall management and distribution of information.	Defining the term computer security. Explaining the term computer security. Explaining the importance of computer security. Defining the term information systems. Explaining the term	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114, 120 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 182-186	Home assignment.

		<u>Things to consider when choosing a computer information system</u> • What hardware is needed, such as input, storage, and output devices? • What software will be most efficient which includes the choice of custom-written, general-purpose, and specialized software? • What processing speed is required and available • What user interface is most appropriate • Levels of computer users involved in their responsibilities • Amount to be processed and the type of information to be produced.	information systems. Listing the things to consider when choosing a computer information system. Explaining the things to consider when choosing a computer information system.		

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					WEEK 3
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Computer security**: **External and internal sources.**	Students will: Understand the various elements of computer security	**Threats to computer and information systems** **1. Internal sources** - protection of files, hardware, and software. **Internal threats to data security** **Accidental damages** • Clerical errors. • Internally produced software may be flawed and may as a result damage data. • Files accidentally erased or	Identifying threats to computer and information systems Listing the threats to computer security and information systems. Listing internal threats to computer security. Explaining each threat to computer security.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 182-186	Home assignment.

		corrupted • E-mail attachments containing viruses **Deliberate damages** • Disgruntled employees with a grudge could attempt to damage critical data using their knowledge of system operations. • An employee may try to attempt to fraudulently obtain money using the company's name.	Eg Threats to computer hardware, computer software, data, and information Explaining accidental and deliberate damages to internal security. Listing accidental and deliberate damages to internal security.		

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					WEEK 4
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Data security** **Common approaches to external threats**	Students will: Understand the various elements of Cyber Security	**External sources –** protection of the physical surroundings, i.e. buildings and rooms. **External threats to data security** **Accidental damages** • Natural disasters • Electrical power surges and spikes **Deliberate damages** • Hackers • Industrial espionage • Physical theft of hardware and software by break-ins. • Terrorist activities • Electronic Eavesdropping	Explaining external threats to data security. Listing common approaches to external security. Explaining the approaches to external security.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 182-186	Research

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					WEEK 5
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Data security** **External threats (Accidental and deliberate damages)**	Students will: Understand the various elements of Cyber Security	**Common approaches to external security** • Closed-circuit TV monitors • Electronic alarm systems • Computer-controlled locks that check employee badges • Biometric recognition, such as fingerprints, retina scans, and voice Access codes	Listing and Explaining accidental and deliberate damages.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 182-186	Research

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WEEK 6

TOPIC/ SUB-TOPIC	GENERAL OBJECTIVE	CONTENT	ACTIVITY	RESOURCE	EVALUATION STRATEGY
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Data protection** **Using software to protect data.**	Students will: Evaluate the different ways of protecting data.	**Using software to protect data** • Passwords and authentication systems • Encryption • Virus protection and malware detection • Firewalls **Passwords –** a string of characters used for authenticating a user on a computer system. **Encryption -** a process of transforming information using an algorithm called a CIPHER to make it unreadable to anyone except those possessing special knowledge. **Virus protection –** software used for the identification and removal of computer viruses. **Firewall –** protects networked computers from intentional hostile intrusion that could compromise confidentiality or result in data corruption.	Explaining ways of using software to protect data. Listing the ways of using software to protect data.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan, and Rayman Khan pages 182-186	Home assignment.

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					WEEK 7
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Data security** **Using physical means to protect data**	Students will: Evaluate the different ways of protecting data.	**Using physical means to protect data** This refers to the ability of people or devices to physically protect computer systems from unauthorized access. **Physical means are:** • Biometric system • Locks and security guards • Fire/waterproof cabinet • Grill Works • Alarms and sensors	Explaining what is meant by using physical means to protect data. Explaining ways of using physical means to protect data. Listing the ways of using physical means to protect data.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 182-186	Home assignment.

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					WEEK 8
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Data security** **Recovery when things go wrong**	Students will: Evaluate the different ways of protecting data.	**Recovery when things go wrong** • **Backups** – it is a copy of a file that you can use if the original file is damaged or not available. Two main types of backups are: • **Full backup** – the computer or network can be set up so that it automatically makes a backup of everything regularly. • **Incremental backup** – copies only the files that have been changed since the last backup. • **Archives –** the process of retaining data for long-term storage. The data might not be in use, however, it can be brought into use and can be stored for future purposes.	Describe what can be done when things go wrong with data. Listing the options of what to do when things go wrong	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 112 – 114 Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 182-186	Home assignment. Group discussions

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					WEEK 9
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Cybersecurity**	Students will: Understand cybersecurity principles. Learn the importance of cybersecurity. Understand the different categories of cybersecurity	**Cybersecurity -** is the practice of protecting critical systems and sensitive information from digital attacks. (Computers, servers, mobile devices, electronic systems, networks, and data) **The reason why cybersecurity is important** • It protects all categories of data from theft and damage. **Categories of cybersecurity** • Network security • Application security • Information security • Disaster recovery	Defining the term cybersecurity. Explaining the term cybersecurity. Listing the reasons why cybersecurity is important. Explaining categories of cybersecurity. Listing categories of cybersecurity.	What is Cyber Security and Why is it Important? (snhu.edu)	Research Quiz

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					WEEK 10
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Cybersecurity**	Students will: Understand the types of cyber-attacks.	**Cyberattack –** is an unwelcomed attempt to steal, alter, expose, disable or destroy information through unauthorized access to computer systems. **Types of cyber-attacks and threats** • Malware • Phishing • Ransomware • Viruses **Challenges in the field of cybersecurity**	Explaining the term cyber-attacks. Listing and explaining the types of cyber-attacks and threats. Discuss the challenges encountered in the field of cybersecurity.	What is Cyber Security and Why is it Important? (snhu.edu)	Group Presentation

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					WEEK 11
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Misuse of information**	Students will: Understand the concept of misuse of information.	**Misuse of information** Some people can misuse information for unpleasant purposes. Some of these misuses are illegal while others are not acceptable. **Terms** 1. Data Theft 2. Copyright infringement 3. Propaganda 4. Computer fraud 5. Computer crime 6. Identity Theft	Explaining misuse of information. Listing and discussing each term associated with the misuse of information. Discuss the impact on the main entities – individual,	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 116 – 118	Group/ Video presentation.

		7. Online publication of obscene materials 8. Denial of service attacks 9. Unauthorized access 10. Electronic eavesdropping 11. Industrial espionage	organization, and government.		

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WEEK 12

TOPIC/ SUB-TOPIC	GENERAL OBJECTIVE	CONTENT	ACTIVITY	RESOURCE	EVALUATION STRATEGY
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Misuse of information**	Students will: Understand the concept of misuse of information.	**Terms** **Implications of computer surveillance** • loss of privacy for the user • lack of security • potential misuse of information – possibly for monetary gain. • Difficulty in determining the source and possible scope of surveillance activities in some organizations. • Limited measures to prevent computer surveillance.	Define the term computer surveillance. Identifying and explaining implications for computer surveillance.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 116 – 118	Group presentation.

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					WEEK 13
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Misuse of information**	Students will: Understand the concept of misuse of information.	**Techniques for surveillance:** • Monitoring with utility software • Monitoring from a distance • Hardware devices **Copyright and piracy** The name is given to the protection in law of the rights of the person(s) responsible for creating such things as text, a piece of music, a painting or a computer program.	Identifying techniques for surveillance. Explaining techniques. Explaining copyright and piracy. Defining copyright and piracy.	Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 116 – 118	Group presentation.

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					WEEK 14
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Personal security practices**	Students will: Explore ways of personal security.	**Personal security practices:** • verifying the authenticity of emails from companies or individuals • assessing website URLs for authenticity • limiting access to open Wi-Fi networks • securing mobile devices • protection in an online environment (for example, social media).	Explaining personal security practices. Listing personal security practices.	Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 212 - 215	Oral Presentation on individual best practices.

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					WEEK 15
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Automation on job security** **Impact of IT in the Workplace**	Students will: Assess the effect of automation on job security	Job security - essentially means employees feel secure and are unlikely to be fired, laid off, or dismissed. Job security eliminates the risk and fear that a job would simply cease to exist or disappear. But when employees feel secure, safe, and valued, employee engagement increases. An engaged workforce has a positive ripple effect. This includes better employee retention, less turnover, and even better overall business performance **Impact of IT in the Workplace** • Loss of jobs • Retraining the employees • Emotional stress	Explaining job security. Explaining the impact of IT in the workplace. Identifying skilled and unskilled jobs in IT	Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 212 - 215	Presentation

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					WEEK 16
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Personnel in Computer-related professions.**	Students will: Know the roles of various personnel in computer-related professions	**Personnel in computer-related professions** It can be divided into three groups: 1. **Software developers** • Systems analysts and designers • Software engineers and programmers • Software trainers	Explaining the personnel in computer-related professions. Listing the three groups of computer-related professions. Explaining the three groups. Listing the professions of the three groups.	Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 218 - 220	Group presentation Project-based on a scenario.

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					WEEK 17
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Personnel in Computer-related professions.**	Students will: Know the roles of various personnel in computer-related professions.	**2. Computer systems staff** • Computer engineers • IT managers • Network administrators • Computer technicians • File librarians	Explaining the personnel in computer-related professions. Listing the 3 groups of computer-related professions. Explaining the three groups. Listing the professions of the three groups.	Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 218 - 220	Group presentation Project-based on a scenario.

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					WEEK 18
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Personnel in Computer-related professions.**	Students will: Know the roles of various personnel in computer-related professions.	**3. Expert users** • Database administrators • Web developers and webmasters • Multi-media artists • Social Media Specialist	Explaining the personnel in computer-related professions. Listing the three groups of computer-related professions. Explaining the three groups. Listing the professions of the three groups.	Heinemann Information Technology for CSEC by K Mary Reid, Deepak Dinesan and Rayman Khan pages 218 - 220	Group presentation Project-based on a scenario. Role plays

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					WEEK 19
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Education**	Students will: Understand the impact of information and communications technology on Education.	**Terms:** • Access to information • Distance teaching • Collaborative teaching and learning • Plagiarism • Online tutoring	Listing and Explaining the terms. Identifying the software used in the Education industry. Identifying the hardware used in the Education industry.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 208 - 209	Home assignment

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					WEEK 20
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Education**	Students will: Understand the impact of information and communications technology on Education.	**Software used in the Education Industry** • Microsoft Office • Moodle • Adobe • AutoCAD • Pascal	Prepare a Moodle page with resources for IT students	Information Technology in FOCUS for CSEC by Ricardo Neil pages 208 - 209	Home assignment

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					WEEK 21
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Education**	Students will: Understand the impact of information and communications technology on Education.	**Hardware used in the Education Industry** • LCD and CRT • Scanner • Printer • Smartboard • Touch screen monitors • Webcam • Multi-media projector • Slate and graphics Tablets • Smart Phones	Create a video on how to use each of the hardware devices listed.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 208 - 209	Home assignment

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					WEEK 22
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Medicine**	Students will: Understand the impact of information and communications technology on Medicine.	**Terms** • Access to information • Telemedicine • eHealth (Online access to health services) • Increase in self–diagnosis • Easy access to medical expertise in distant locations.	Listing and Explaining the terms. Describing the uses of technology in medicine. Visits of RESOURCES personnel.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 207 – 208 Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 75– 76	Home assignment

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					WEEK 23
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Medicine**	Students will: Understand the impact of information and communications technology on Medicine.	**Uses of Technology in Medicine** • Prosthetics • Nano therapy for cancer • DNA testing • Scans • Medical Research • Expert systems (artificial intelligence) • Medical models • Virtual reality simulations	Find video on the use of Technology in Medicine	Information Technology in FOCUS for CSEC by Ricardo Neil pages 207 – 208 Oxford Information Technology for CSEC by Glenda Gay and Ronald Blades pages 75– 76	Home assignment

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					WEEK 24
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Business**	Students will: Understand the impact of information and communications technology on Business.	**Terms** • E-commerce • Electronic point of sale • Telecommuting	Listing and Explaining the terms. Identifying the software used in the Business industry. Identifying the hardware used in the Business industry.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 206 - 207	Home assignment

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					WEEK 25
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Business**	Students will: Understand the impact of information and communications technology on Business.	**Software used in the Business Industry** • Word • Access • Excel • Outlook • PowerPoint • Publisher • Communication software applications (Skype, WhatsApp etc) **Hardware Used in the**	Create a video to demonstrative the use of each of the software used in business	Information Technology in FOCUS for CSEC by Ricardo Neil pages 206 - 207	Home assignment

		Business Industry • Monitors • Computer system • Webcam • Fax machine • Printers • Scanners • Photocopying machines • Electronic Bill Boards			

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					WEEK 26
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Law Enforcement**	Students will: Understand the impact of information and communications technology on Law Enforcement.	**Terms** • E- surveillance • Fingerprinting • Biometrics	Listing and Explaining the terms. Identifying the software used in law enforcement. Identifying the hardware used in law enforcement.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 209	Presentation

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					WEEK 27
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Law Enforcement**	Students will: Understand the impact of information and communications technology on Law Enforcement.	**Software used in the Business Industry** • Microsoft Office • Report Exec Suite • Crimestar – Records Management System • CSE – Crimesoft • Digital Cop – Digital Cop Software • Linux **Hardware used in the Business Industry** • Computer Systems • LCD Monitor • Fingerprint and Facial Image Auto-Capture • DNA analyzer • Iris reader • Speech Recognition Analyzer	Invite resource personnel to make presentations and demonstrations.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 209	Presentation

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					WEEK 28
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Recreation**	Students will: Understand the impact of information and communications technology on Recreation.	**Terms** • Music • Gaming **Software used in Music** • Virtual DJ • DJ mixer Pro **Hardware used in Music** • Computer system • Mixer table • Laser printer to print labels	Listing and Explaining the terms. Identifying the software used in music and gaming. Identifying the hardware used in music and gaming.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 210 - 211	Research

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					WEEK 29
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
SOCIAL AND ECONOMIC IMPACT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) **Impact on Recreation**	Students will: Understand the impact of information and communications technology on Recreation.	**Software used in Gaming** • Mario • Need for speed • Call of Duty **Hardware used in Gaming** • Joystick • Mice • Keyboard • Customized computer systems for gaming	Listing and Explaining the terms. Identifying the software used in music and gaming. Identifying the hardware used in music and gaming. Allow students to add to the list.	Information Technology in FOCUS for CSEC by Ricardo Neil pages 210 - 211	Home assignment

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WEEK 30

TOPIC/ SUB-TOPIC	GENERAL OBJECTIVE	CONTENT	ACTIVITY	RESOURCE	EVALUATION STRATEGY
Information Processing Data and Information	Understand the difference between data and information	Data represent individual facts or observations, while information is the meaningful interpretation or understanding derived from that data. Simply put, Data is raw unprocessed facts while information is processed data.	Role-playing scenarios of collecting data and processing it to produce meaningful information Classifying data and information Differentiating between data and information Role-Play Scenarios: Assign students different roles, such as a data collector, an analyst, and a decision-maker. Provide them with a scenario or problem that requires the collection, analysis, and interpretation of data. Guide them through the process and discuss how each role contributes to transforming data into meaningful information. Classifying Examples: Provide examples or scenarios and ask students to determine if they represent data or information. For instance, present a sentence like "The temperature is 25 degrees Celsius." Students can determine that this is information because it provides meaning and context to the temperature value.	CSEC Information Technology Study Guide Oxford Information Technology 2nd Edition	Written assessment Group Presentation Oral Questioning

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WEEK 31

TOPIC/ SUB-TOPIC	GENERAL OBJECTIVE	CONTENT	ACTIVITY	RESOURCE	EVALUATION STRATEGY
Information Processing Data Capture	Get acquainted with the Information Retrieval Process	• What is data capture? Data capture refers to the process of collecting and recording data from various sources and converting it into a digital format that can be stored, processed, and analyzed. The data capture process involves capturing data from physical or electronic sources and transforming it into structured or unstructured data for further use. • Sources of data and information include: people, physical documents, electronic files, online forms, sensors, databases, or other systems that generate or store data.	Data Collection Scavenger Hunt Real-World Data Capture Case Study Data Collection Scavenger Hunt: Divide students into small groups and provide them with a list of data elements or attributes to collect from different sources. Assign each group a specific data source, such as physical documents, online forms, or websites. Students must identify and capture the required data elements using appropriate methods and tools. Afterwards, have groups present their findings and discuss the challenges and strategies they employed. Real-World Data Capture Case Study: Present students with a case study or scenario where data capture plays a crucial role. It could be related to inventory management, customer surveys, or data migration. Ask students to analyze the requirements, devise a data capture strategy, and outline the steps they would take to capture and manage the data effectively.	CSEC Information Technology Study Guide Oxford Information Technology 2nd Edition	Written Assessment Group Presentation

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Curriculum Area: Information Technology **GRADE 9**

WEEK 32

TOPIC/ SUB-TOPIC	GENERAL OBJECTIVE	CONTENT	ACTIVITY	RESOURCE	EVALUATION STRATEGY
Information Processing Difference between data validation and verification	Appreciate the difference between data validation and verification	• Data Validation: Data validation is the process of ensuring that data is accurate, consistent, and meets specific criteria or rules. It focuses on checking the integrity and validity of the data. Data validation involves verifying that the data values are within acceptable ranges, follow the specified format, and adhere to any defined constraints or business rules. The purpose of data validation is to identify and correct errors, inconsistencies, or discrepancies in the data. It helps maintain data quality and reliability. Data Verification: Data verification, on the other hand, refers to the process of confirming the accuracy and correctness of data. It involves comparing the data against a trusted source or reference to ensure that it is accurate and reliable.	Designing Data Validation Rules Completing Data Verification Exercises Designing Data Validation Rules: Assign students the task of designing data validation rules for a specific dataset or application. Provide them with sample data and ask them to define the rules or constraints that should be applied to ensure the data's integrity and validity. Students can collaborate in groups, brainstorming and discussing different scenarios and validation criteria. They can present their rules and justifications to the class. Data Verification Exercises: Provide students with a set of data and a trusted reference source or dataset.	CSEC Information Technology Study Guide Oxford Information Technology 2nd Edition	Written assessment Oral questioning

			Ask them to verify the accuracy of the data by comparing it against the reference source. Students can identify and flag any discrepancies or errors they find, explaining why they consider the data to be correct or incorrect. This exercise helps students understand the importance of data verification and the need to rely on authoritative sources.		

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					WEEK 33
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
Information Processing Data Verification	Become cognizant of the need for verification in information processing	Methods of verification: Double Entry: Double entry is a method of verification commonly used in accounting and financial systems. It involves entering data twice and comparing the two entries to detect and correct errors.	Proofreading Practice Collaborative Editing Proofreading Practice: Give students a sample document or writing assignment that contains various typographical errors, including spelling mistakes, punctuation errors, or missing words. Ask students to proofread the document carefully and mark the errors they find. Then, discuss the errors as a class and allow students to share their corrections and explanations. These activities help students improve their proofreading skills and attention to detail.	CSEC Information Technology Study Guide Oxford Information Technology 2nd Edition	Written assessment Oral questioning

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Curriculum Area: Information Technology **GRADE 9**

					WEEK 34
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**
Data Verification	Become cognizant of the need for verification in information processing	Proofreading is a method of verification that involves carefully reviewing and checking written or printed documents for errors in spelling, grammar, punctuation, formatting, and content. Errors made during data entry: Typographical errors, also known as typos, are mistakes made while typing or entering text. Transpositional errors are a specific type of typographical error that involves the swapping or reversing of letters, numbers, or words.	Collaborative Editing: Divide students into small groups and provide each group with a piece of writing that contains typographical and transpositional errors. In a collaborative editing exercise, students take turns reading the text aloud while others listen and identify errors. The group works together to correct the errors and discuss the reasoning behind the corrections. This **activity** encourages teamwork, communication, and critical thinking skills.	CSEC Information Technology Study Guide Oxford Information Technology 2nd Edition	Written assessment Oral questioning

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Curriculum Area: Information Technology **GRADE 9**

					WEEK 35
TOPIC/ SUB-TOPIC	**GENERAL OBJECTIVE**	**CONTENT**	**ACTIVITY**	**RESOURCE**	**EVALUATION STRATEGY**

Information Processing
 	
Data Validation
	Become cognizant of the need for validation in information processing	• Methods of validation
		  ○ range check
		  ○ reasonableness checks
		  ○ datatype checks
		  ○ consistency checks
		  ○ presence checks
		  ○ format checks
		  ○ length checks
		
		These methods of data validation help identify errors, inconsistencies, and inaccuracies in data. These validation techniques can ensure that data is valid, reliable, and fit for its intended purpose. Implementing a combination of these validation methods provides comprehensive data quality control and helps maintain the integrity and reliability of the information.
			Discussing validation techniques
			
			PowerPoint Presentation
				CSEC Information Technology Study Guide
				
				Oxford Information Technology 2nd Edition
					Group Presentation
					
					Oral questioning