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| COMPUTER FORM 1 SCHEMES OF WORK – TERM 1 |
| **WEEK** | **LESSON** | **TOPIC** | **SUB-TOPIC** | **LEARNING OBJECTIVES** | **TEACHING/LEARNING****ACTIVITIES** | **TEACHING/LEARNING****RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** |  | DEFINITION OF A COMPUTER | By the end of the lesson, the learner should be able to* Define computer
* Distinguish between data and information
* Explain unique characteristics of computer as a data processing tool
 | Learner to:* Through questions and answer define computer
* Through brainstorming distinguish between data and information
* Through group discussion, discuss characteristics of a computer as data processing tools
 | * A calculator
* A personal Computer
* Charts
* Sample data
 | * Lomghorn Secondary. S.Mburu, G. Chemwa page 1-2
* Computer studies Dr. Onunga and Renu Shah Page 1-2
 |  |
|  | **2-3** |  | PHYSICAL PARTS OF A COMPUTER | By the end of the lesson, the learner should be able to* State and explain various physical parts of a computer
 | * Through question and answer list parts of a Computer
* Through brainstorming, explain various parts of a computer
 | * A working personal computer
 | * Gateway secondary Revision S.Mburu G. Chemwa pg 1
* Foundations of Computer studies by Pepela pg 3
 |  |
| **2** | **1** |  | CLASSIFICATION OF COMPUTERS | By the end of the lesson, the learner should be able to* Classify computer according to physical size
 | Learner to* In group of two identify and discuss pictures from books, magazines
 | * Charts or photographs from books, magazines or newspapers
 | * Gateway secondary Revision S.Mburu G. Chemwa pg 7-8
 |  |
|  | **2-3** |  | CLASSIFICATION OF COMPUTERS | * Classify computer according to functionality and according to purpose
 | * Discussion
* Q/A
 | * Charts or photographs from books, magazines or newspapers
 | * Onunga and Renu Shah Page6
 |  |
| **3** | **1** |  | DEVELOPMENT OF COMPUTERS | By the end of the lesson, the learner should be able to* Explain how computers have developed
 | * Through brainstorming identify and discuss non-electronic tools
 | * Charts or photographs from books, magazines or newspapers
 | * Lomghorn Secondary. S.Mburu, G. Chemwa page 10
 |  |
|  | **2-3** |  | ELECTRONIC COMPUTERS | * List five generations computers
 | * In group of three, discuss five generation computers
 | * Charts or photographs from books, magazines or newspapers
 | * Lomghorn Secondary. S.Mburu, G. Chemwa page 12-13
* Foundations of Computer studies by Pepela pg 22
 |  |
| **4** | **1** |  | AREAS WHERE COMPUTER ARE USED | By the end of the lesson, the learner should be able to* Identify areas where computers are used
* Describe the listed areas where computers are used
 | Learner to* Through brainstorming identify and discuss areas where computers are used
 | * Flash Cards
 | * Lomghorn Secondary. S.Mburu, G. Chemwa page 14-15
 |  |
|  | **2-3** |  | * THE COMPUTER LABORATORY
* MEASURES THAT PROTECT COMPUTER
 | * Define computer laboratory
* Describe the safety precautions and practices that protect computer
 | * Through question and answer define computer laboratory
* In group of three, discuss safety precautions and practices that protect computer
 | * UPS,Surge protector
* charts
 | * Foundations of Computer studies by Pepela pg 47
 |  |
| **5** | **1** |  | MEASURES THAT PROTECT USER | * Describe the safety precautions and practices that protect user
 | * In group of three, discuss safety precautions practices that protect user
 | * Antiglare standard furniture
 |  |  |
|  | **2-3** |  | PRACTICAL HANDS-ON SKILLS | By the end of the lesson, the learner should be able to* Start up a computer
* Restart a computer
* Shutting down computer
 | * Through demonstration by the teacher, learner to observe and imitate on how to start up a computer, restart a computer and shut down computer
 | * Computer
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 21-23
 |  |
| **6** | **1** |  | KEYBOARD AND MOUSE SKILLSKEYBOARD SKILLS | By the end of the lesson, the learner should be able to* Define keyboard
* Identify parts of the Keyboard
 | Learner to* Through brainstorming define keyboard and identify parts of the Keyboard
 | * Computer keyboard
* Mobile keyboard
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 22
 |  |
|  | **2-3** |  | KEYBOARD SKILLS | * Discuss parts of the keyboard
* Type using keyboard
 | * In group of three, discuss parts of the keyboard and type using keyboard
 | * charts
 | * Foundations of Computer studies by Pepela pg 25
 |  |
| **7** | **1** |  | TYPING TUTOR | * Identify typing tutors
* Use typing tutors
 | * Through question and answer identify typing tutors and use typing tutors
 | * Typing tutor software computer
 |  |  |
|  | **2-3** |  | MOUSE SKILLS | * Define computer mouse
* Identify parts of the mouse
 | * Through brainstorming define computer mouse and identify parts of the mouse
 | * Computer mouse
 | * Lomghorn Secondary. S.Mburu, G. Chemwa page 23
 |  |
| **8** | **1** |  | MOUSE SKILLS | By the end of the lesson, the learner should be able to:* Describe parts of mouse
* Use mouse techniques
 | * In group of three, discuss parts of the mouse
 | * Computer mouse
 | * Foundations of Computer studies by Pepela pg 23-25
 |  |
|  | **2-3** |  | MOUSE SKILLS | * Drag and drop items
* Open file and folders through double clicking, right clicking
 | * Through demonstration by the teacher, learner to observe and imitate on how to drag and drop items
 | * Computer mouse
 | * Foundations of Computer studies by Pepela pg 23-25
 |  |
| **COMPUTER SYSTEM** |
| **9** | **1** |  | COMPUTER SYSTEMSINPUT DEVICES(KEYING DEVICES | By the end of the lesson, the learner should be able to* Describe computer system
* Define input devices
 | Learner to* Through brainstorming describe computer system
* define input devices
 | * Computer system
* PDA’s
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 30-31
 |  |
|  | **2-3** |  | INPUT DEVICES (KEYING DEVICES) | * List keying devices
* Describe keying devices
 | * Through questions and answer, list keying devices, describe keying devices
 | * Computer Keyboard
* PDA’s Keypad
 | * Foundations of Computer studies by Pepela pg 68
 |  |
| **10** | **1** |  | POINTING DEVICES | * Define pointing devices
* List pointing devices
* Describe the listed pointing devices
 | * Through question and answer define scanning device
* In group of three, describe the listed pointing devices
 | * Mouse
* Joystick
* Light pen
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 30-34
 |  |
|  | **2-3** |  | SCANNING DEVICES | * Define scanning devices
* List scanning devices
* Describe scanning devices
 | * Through question and answer define scanning device
* In group of three, describe the listed scanning device
 | * Pictures from books and Magazines
 | * Foundations of Computer studies by Pepela pg 70
 |  |
| **11** | **END TERM 1 EXAM** |
| **12** | **REVISION** |
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| **COMPUTER FORM 1 SCHEMES OF WORK – TERM 2** |
| **COMPUTER SYSTEMS (cont)** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** |  | COMPUTER SYSTEMSDIGITIZERSSPEECH RECOGNITION DEVICES | By the end of the lesson, the learner should be able to* Define digitizer
* List other input technologies
* Describe the listed input technologies
 | Learner to:* Through question and answer define digitizer
* Through brainstorming to list other input technologies
* Through group discussion, discuss the listed input technologies
 | * Pictures from books and newspapers
* PDA’s
 | * Lomghorn Secondary. S.Mburu, G. Chemwa page 37-38
* Foundations of Computer studies by Pepela pg 76
 |  |
|  | **2-3** |  | CENTRAL PROCESSING UNIT | By the end of the lesson, the learner should be able to* Define term CPU
* List functional elements of CPU
 | * Through questions and answer define the term CPU
* Through brainstorming, list and illustrate the functional elements of CPU
 | * A working personal computer
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 40
* Foundations of Computer studies by Pepela pg 77
 |  |
| **2** | **1** |  | CONTROL UNIT AND ARITHMETIC LOGIC UNIT | * Describe the control Unit and Arithmetic Logic Unit
 | * Through brainstorming, describe the Control Unit and Arithmetic Logic Unit
 | * Charts
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 41-42
 |  |
|  | **2-3** |  | MAIN MEMORY | By the end of the lesson, the learner should be able to* Classify computer memories
* List examples of primary memory and secondary memory
* State characteristics of RAM and ROM
 | Learner to:* Through question and answer classify computer memories
* Trough brainstorming list examples of primary memory and secondary memory
* Through questions and answer state characteristics of RAM and ROM
 | * Pictures from books
* RAM module
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 41-43
 |  |
| **3** | **1** |  | SPECIAL PURPOSE MEMORIES | * Define special purpose memory
* List special purpose memories
* Describe Cache memory and Buffers
 | * Through question and answer define special purpose memory and list special purpose memories
* Through brainstorming describe Cache memory and Buffers
 | * Input/output devices
* microprocessor
 | * Foundations of Computer studies by Pepela pg 77
 |  |
|  | **2-3** |  | SPECIAL PURPOSE MEMORIES | * Define registers
* List types of registers
* Describe the listed types of registers
 | * Through question and answer define registers and list types of registers
* In group of five, discuss the listed types of registers
 | * Chart
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 44-45
 |  |
| **4** | **1** |  | MEMORY CAPACITY | By the end of the lesson, the learner should be able to* Define byte
* Express memory quantities
* Calculate memory quantities
 | Learner to:* Through questions and answer define byte
* Through teachers demonstration, express memory quantities and calculate memory quantities
 | * RAM module
* Flash cards
 | * Foundations of Computer studies by Pepela pg 79-80
 |  |
|  | **2-3** |  | OVERALL FUNCTIONAL ORGANIZATION OF THE CPU | * Define computer bus
* List types of computer buses
* Describe the listed computer buses
* Give an illustration of the overall functional organization of the CPU
 | * Through brainstorming, define computer bus
* In group of five, discuss the listed types of computer buses
* Through group discussion, illustrate the overall functional organization of the CPU
 | * Schematic diagram from the book
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 48
 |  |
| **5** | **1** |  | TYPES OF PROCESSORS | * Classify processors
* Discuss the listed processor classifications
 | * Through question and answer Classify processors
* Through group discussion, discuss the listed processor classification
 | * Photograph
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 48
 |  |
|  | **2-3** |  | TRENDS IN PROCESSORS TECHNOLOGY AND SPEED | * List processors

TypeManufacturesYear and speed | * Through question and answer, list processors Type, manufactures, year and speed
 | * Photograph
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 44-47
 |  |
| **6** | **1** |  | OUTPUT DEVICES | By the end of the lesson, the learner should be able to* Define output device
* Classify output devices
* List softcopy output devices
* Describe monitor as a soft copy output device
 | Learner to:1. Through question and answer define output device and classify output devices
2. Through group discussion, discuss the listed softcopy output devices
 | * CRT,LCD, TFT monitors
* Speakers
* LED
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 51-60
* Foundations of Computer studies by Pepela pg 80
 |  |
|  | **2-3** |  | MONITOR DISPLAY TERMINOLOGIES AND VIDEO GRAPHIC ADAPTERS | * Define the terminologies used in monitor
* List and describe the video graphic adapters
 | * Through question and answer define terminologies
* Through group discussion, describe the listed video graphic adapters
 | * Photograph from books
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 49-52
 |  |
| **7** | **1** |  | HARDCOPY OUTPUT DEVICES | * Describe hard copy output devices
 | * Through group discussion, describe hard copy output devices
 | * Printers
* Pictures from magazines
* Newspapers
 | * Foundations of Computer studies by Pepela pg 81
 |  |
|  | **2-3** |  | HARD COPY OUTPUT DEVICES | * List factors to consider when purchasing a printer
 | * Through question and answer list factors to consider when purchasing a printer
 | * Printers
* Pictures from magazines
* Newspapers
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 53
 |  |
| **8** | **1** |  | SECONDARY STORAGE DEVICES AND MEDIA | * List secondary storage media
* Describe removable storage device
 | * Through question and answer list secondary storage media
* Through group discussion, describe removable storage device
 | * Flash disc
* Floppy
* Diskettes
* Memory sticks
* Compact disk
* Hard disk
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 61-69
 |  |
|  | **2-3** |  | SECONDARY STORAGE DEVICES AND MEDIA | By the end of the lesson, the learner should be able to* Discuss fixed storage device
 | * Through brainstorming, discuss fixed storage device
 | * Flash disc
* Floppy
* Diskettes
* Memory sticks
* Compact disk
* Hard disk
 | * Foundations of Computer studies by Pepela pg 101
 |  |
| **9** | **1** |  | POWER SUPPLY AND PERIPHERAL DEVICE INTERFACING | * Distinguish between power and interface cables
* Describe power cables
 | * Through question and answer, distinguish between and interface cables
 | * Computer power cables
* Interface cables
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 65-67
 |  |
|  | **2-3** |  | POWER SUPPLY AND PERIPHERAL DEVICE INTERFACING | * Describe interfacing cables
 | * Through discussion, describe interfacing cables
 | * Computer power cables
* Interface cables
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 65-67
 |  |
| **10** | **1** |  | BASIC COMPUTER SET-UP AND CABLING | By the end of the lesson, the learner should be able to* Explain basic computer setup and cabling
 | * Through teachers demonstration, explain basic computer setup and cabling
 | * Computer power cables
* Interface cables
 | * Foundations of Computer studies by Pepela pg 101
 |  |
|  | **2-3** |  | “” | * Mount hard drives and optical drives
 | * Through teachers demonstration, mount hard drives and optical drives
 | * Computer
 | * Foundations of Computer studies by Pepela pg 101
 |  |
| **11** | **1** |  | COMPUTER SOFTWARE | By the end of the lesson, the learner should be able to* Distinguish between system software and application software
 | * Through question and answer, distinguish between system software and application software
 | * Computer software’s
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 73-76
 |  |
|  | **2-3** |  | COMPUTER SOFTWARE | * Classify software according to purpose
 | * Through brainstorming, classify software according to purpose
 | * Computer software’s
 | * Foundations of Computer studies by Pepela pg 143-144
 |  |
| **12** | **1** |  | COMPUTER SOFTWARE | * Classify software according to acquisition
 | Through brainstorming, classify software according to acquisition | * Computer software’s
 | * Foundations of Computer studies by Pepela pg 143-144
 |  |
|  | **2-3** |  | COMPUTER SOFTWARE | * Classify software according to end user- License
* Evaluate criteria for selecting computer system
 | * Through brainstorming, classify software according to user- License
* Through question and answer, Evaluate criteria for selecting computer system
 | * Computer software’s
 | * Foundations of Computer studies by Pepela pg 143-144
 |  |
| **13** | **END TERM EXAM AND REVISION** |  |
|  |
| **COMPUTER FORM 1 SCHEMES OF WORK – TERM 3** |
| **OPERATING SYSTEM (OS)** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** |  | DEFINITION OF AN OPERATING SYSTEM | By the end of the lesson, the learner should be able to* Illustrate an operating system as a supervisor of hardware and application software
 | Learner to* Identify operating system used by the computer
 | * Charts
* computer
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 82
* Foundations of Computer studies by Pepela pg 155
 |  |
|  | **2-3** |  |  | * Identify parts of operating system
 | * Through brainstorming describe parts of the operating system
 | * Charts
* computer
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 82
* Foundations of Computer studies by Pepela pg 155
 |  |
| **2** | **1** |  | FUNCTION OF AN OPERATING SYSTEM | By the end of the lesson, the learner should be able to* List devices under the operating system
 | * Through questions and answers, list devices under control of operating system
 | * Flash Cards
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 83-85
 |  |
|  | **2-3** |  | DEVICES UNDER THE OPERATING SYSTEM CONTROL | * State functions of an operating system in resource management
 | * Through brainstorming, state functions of operating system
 | * Computer
* Operating system
* software
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 87
 |  |
| **3** | **1** |  | TYPES OF OPERATING SYSTEM | By the end of the lesson, the learner should be able to* List types of operating system
 | Learner to1. List and describe types of operating system
 | * PC’s loaded with different operating systems, pupils book part 3,4
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 83-85
 |  |
|  | **2-3** |  |  | Describe:* Single program and multitasking operating system
 | 1. Draw a summary diagram of various operating system types
 | * PC’s loaded with different operating systems, pupils book part 3,4
 | * Foundations of Computer studies by Pepela pg 170
 |  |
| **4** | **1** |  |  | * Multi- user and single user operating system
 | * Draw a summary diagram of various operating system types
 | * Chart
 | * Foundations of Computer studies by Pepela pg 170
 |  |
|  | **2-3** |  |  | * Command line, menu driven and graphical user interface operating system
 | * Draw a summary diagram of various operating system types
 | * Chart
 | * Gateway Secondary Revision, S.Mburu G.Chemwa pg 90-91
 |  |
| **5** | **1** |  | HOW OPERATING SYSTEM ORGANIZE INFORMATION | By the end of the lesson, the learner should be able to* State and explain factors that dictate file organization
 | * Identify features on windows desktop
 | * PC loaded with any version of windows
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 89-94
 |  |
|  | **2-3** |  |  | * Describe files, folders and drives
* Start Microsoft windows
 | * Identify features on windows desktop
 | * PC loaded with any version of windows
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 89-94
 |  |
| **6** | **1** |  | MANAGING FILE AND FOLDERS | By the end of the lesson, the learner should be able to* Distinguish between folder and directory
* Draw directory (folder) tree
 | Learner to* Create folder in both Graphical user interface and MS-DOS
 | * Flash cards
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 95-97
 |  |
|  | **2-3** |  | MANAGING FILE AND FOLDERS | * Create ne files and folders
* Identify parts of an application window
 |  | * Flash cards
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 95-97
 |  |
| **7** | **1** |  |  | * Save changes to a file
* Rename files or folders
* Copy, move, sort files and folders
 | Learner to* Save changes to a file, rename files and folders
 | * Personal computer loaded with any version of windows
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 95-97
 |  |
|  | **2-3** |  |  | * Manipulate files and folders using

Short cut menu, drag and dropSelecting multiple files and foldersSearching for files and folders | * In group of two, manipulate files and folders using

Shortcut menu, drag and dropSelecting multiple files and foldersSearching for files and folders | * Personal computer loaded with any version of windows
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 90
 |  |
| **8** | **1** |  | DISK MANAGEMENT USING WINDOWS | By the end of the lesson, the learner should be able to* Format disk
* Back-up data
 | Learner to:In group of three* Format disk
* Back-up data
 | * Personal computer loaded with any version of windows
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 106-113
 |  |
|  | **2-3** |  |  | * scan problems related to disk
* defragment a disk
 | In group of three * use scan disk to detect disk errors
* defragment a disk
 | * floppy diskette
* flash disk
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 106-113
 |  |
| **9** | **1** |  |  | * Compress files within a disk
* Scan a disk for virus
 | In a group of three* Compress a disk
 | * floppy diskette
* flash disk
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 106-113
 |  |
|  | **2-3** |  |  | * Create/restore back-up data
* Create startup disk
* Partition a disk
 | In group of three* Partition a disk
 | * Un partition
* Hard disk
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 106-113
 |  |
| **10** | **1** |  | INSTALLATION AND CONFIGURING AN OPERATING SYSTEM | By the end of the lesson, the learner should be able to* Know installation requirements
 | Learner to* List installation requirement
* Describe the listed installation requirements
 | * Personal computer without an operating system
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 114-117
 |  |
|  | **2-3** |  |  | * Install operating system
 | * With the help of the teacher install operating system
 | * Installation and start up disk
* Manufactures documentations
 | * Foundations of Computer studies by Pepela pg 170
 |  |
|  |
| **COMPUTER FORM 2 SCHEMES OF WORK – TERM 1** |
| **APPLICATION PACKAGES (WORD PROCESSORS)** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** |  | Reporting from home and settling for first term work |
| **2** | **1** |  | DEFINITION OF WORD PROCESSOR | By the end of the lesson, the learner should be able to* Define the term word processor
* Explain the purpose of a word processor
 | * Q/A discussion
 | * Newspapers
* Letters
* Cards
* books
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 1-3
 |  |
|  | **2-3** |  | USING A WORD PROCESSING PACKAGE | By the end of the lesson, the learner should be able to* Start a Microsoft word
* Explain the Microsoft screen layout
 | * Q/A demonstration practical
 | * Handouts
* Books
* Working personal computer
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 5-10
 |  |
| **3** | **1** |  | RUNNING THE PROGRAMME | By the end of the lesson, the learner should be able to* Save and retrieve
* Close and exit
 | * Q/A demonstration practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Secondary. S.Mburu, G. Chemwa page 13-17
 |  |
|  | **2-3** |  | EDITING AND FORMATTING A DOCUMENT | By the end of the lesson, the learner should be able to* Select a document
* Move, copy and delete
* Insert and type over
 | * Q/A demonstration practical
 | * Handouts
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 16-19
 |  |
| **4** | **1** |  | FIND AND REPLACE | By the end of the lesson, the leaner should be able to* Define the term find and replace
* Find and replace a documents
* Use thesaurus
 | * Q/A Demonstration practical
 | * Letters
* Card working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 16-24
 |  |
|  | **2-3** |  | TEXT FORMATTING | By the end of the lesson, the learner should be able to* Bold, italicize, underline, change fonts
 | * Q/A Demonstration practical
 | * Letters
* Cards
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 22-23
 |  |
| **5** | **1** |  | PARAGRAPH FORMATTING | By the end of the lesson, the learner should be able to* Drop cap, sub and superscript
* Align and indent text
 | * Q/A demonstration practical
 | * Handouts
* Cards
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 22-23
 |  |
|  | **2-3** |  | PARAGRAPH FORMATTING | By the end of the lesson, the learner should be able to* Space and section break
* Bullet and number
* Insert columns/page headers and footers
 | * Q/A demonstration practical
 | * Books
* Newspapers
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 22-23
 |  |
| **6** | **1** |  | SET-UP | By the end of the lesson, the learner should be able to* Set up margins
* Set paper size and orientation
 | * Q/A demonstration practical
 | * Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 33-35
 |  |
|  | **2-3** |  | SET-UP | By the end of the lesson, the learner should be able to* Define the term table
* Crate tables
* Insert rows and columns
* Merge/split rows
 | * Q/A Demonstration practical
 | * Handouts
* Working computer
* books
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 37-39
 |  |
| **7** | **1** |  | TABLE CONVERSION/ ARITHMETIC CALCULATIONS | By the end of the lesson, the learner should be able to* convert text to a table and vice verse
* import tables/perform calculations
 | * Q/A Demonstration practical
 | * Handouts
* Working computer
* Chalk board
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 40-41
 |  |
|  | **2-3** |  | MAIL MERGE | By the end of the lesson, the learner should be able to* Define the term mail merge
* Create: main document and data source
* Merge fields
 | * Q/A Demonstration practical
 | * Letters
* Card
* Working computer
* Chalk board
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 44-46
 |  |
| **8** | **1** |  | GRAPHICS | By the end of the lesson, the learner should be able to* Define the term graphic
* Insert/edit graphics
 | * Q/A Demonstration practical
 | * Clip art
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 44-49
 |  |
|  | **2-3** |  | PRINTING | By the end of the lesson, the learner should be able to* Define the term printing
* Set up the printer and print
 | * Q/A Demonstration practical
 | * Letters
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 44
 |  |
| **9** | **1** |  | SPREAD SHEETS (SPREADSHEETS) | By the end of the lesson, the learner should be able to* Define the term spreadsheets
* Explain the application areas of spreadsheet
 | * Q/A Discussion
 | * Call register
* Accounts book
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 52-53
 |  |
|  | **2-3** |  | CREATING A WORKSHEET | By the end of the lesson, the learner should be able to* Define the term worksheet
* Create a worksheet
* Save/retrieve a worksheet
 | * Q/A demonstration practical
 | * Handouts
* Class register
* Accounts book
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 57-65
 |  |
| **10** | **1** |  | CELL DATA TYPES | By the end of the lesson, the learner should be able to* Define the term cell data type
* Explain the different data types
 | * Q/A discussion
 | * Books
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 66
 |  |
|  | **2-3** |  | CELL REFERENCING | By the end of the lesson, the learner should be able to* Define the term cell referencing
* Explain the different cell referencing
* Apply cell referencing on a computer
 | * Q/A Demonstration practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 66-69
 |  |
| **11** | **1** |  | FUNCTIONS AND FORMULAE | By the end of the lesson, the learner should be able to* Differentiate between functions and formulae
* Apply functions and formulae on a document
 | * Q/A demonstration Practical
 | * Working computer
* Books
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 70-73
 |  |
|  | **2-3** |  | WORKSHEET FORMATTING | By the end of the lesson, the learner should be able to* Format a worksheet: text, numbers, rows, columns and global
 | * Q/A Demonstration practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 74-79
 |  |
| **12** | **1** |  | DATA MANAGEMENT | By the end of the lesson, the learner should be able to* Explain the terms, Sort, filter, total forms
* Apply the above features
 | * Q/A Demonstration practical
 | * Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 73-75
 |  |
|  | **2-3** |  | CHARTS/GRAPHICS | By the end of the lesson, the learner should be able to* Definite the terms chart
* Explain the different charts
* Insert charts
 | * Q/A Demonstration practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 77-79
 |  |
|  | **END TERM EXAMS/SCHOOLS CLOSE** |
|  |
| **COMPUTER FORM 2 SCHEMES OF WORK – TERM 2** |
| **DATABASES** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** |  | Reporting from home and settling for the second term work |
| **2** | **1** |  | DATABASE | By the end of the lesson, the learner should be able to* Define the database
* Explain the concept of D/base
 | * Q/A discussion
 | * Class list
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 93-94
 |  |
|  | **2-3** |  | DATABASE MODELS | By the end of the lesson, the learner should be able to* Define the term d/base model
* Explain the difference d/base models
* Discuss the features of a database
 | * Q/A demonstration practical
 | * Handouts
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 96-98
 |  |
| **3** | **1** |  | DATA ORGANIZATION | By the end of the lesson, the learner should be able to* Organize data in a database
* Start Ms Access
 | * Q/A demonstration practical
 | * Handouts
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 97-100
 |  |
|  | **2-3** |  | MS ACCESS SCREEN LAYOUT | By the end of the lesson, the learner should be able to* Explain the access screen layout
* Create a database
 | * Q/A Demonstration practical
 | * Letters
* Cards
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 100-104
 |  |
| **4** | **1** |  | EDITING A D/BASE | By the end of the lesson, the learner should be able to* Edict a data base
 | * Q/A Demonstration practical
 | * Letters
* Cart
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 108-109
 |  |
|  | **2-3** |  | QUERIES | By the end of the lesson, the learner should be able to* Define the term query
* Crate a query
 | * Q/A Demonstration Practical
 | * Letters
* Card
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 116-117
 |  |
| **5** | **1** |  | UPDATING A QUERY | By the end of the lesson, the learner should be able to* Update a query
* View a query
 | * Q/A Demonstration practical
 | * Handouts
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 120-122
 |  |
|  | **2-3** |  | FORM DESIGN | By the end of the lesson, the learner should be able to* Explain the form layout
* Create a form
 | * Q/A Demonstration practical
 | * Books
* Newspaper
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 110-113
 |  |
| **6** | **1** |  | FORMATTING FIELDS | By the end of the lesson, the learner should be able to* Display records in a form
* Format fields
 | * Q/A Demonstration practical
 | * Handouts
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 113
 |  |
|  | **2-3** |  | REPORTS LAYOUT | By the end of the lesson, the learner should be able to* Define a report
* Create a report
* Modify a report
 | Q/A Demonstration Practical | * Handouts
* Books
* Working Computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 125-129
 |  |
| **7** | **1** |  | REPORTS LAYOUT | By the end of the lesson, the learner should be able to* Sort and group data in a report
* Design labels
 | * Q/A Demonstration practical
 | * Forms
* Report
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 40-41
 |  |
|  | **2-3** |  | PRINTING | By the end of the lesson, the learner should be able to* Define the term printing
* Print: form and a report
 | * Q/A Demonstration Practical
 | * Forms
* Report
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 112
 |  |
| **DESKTOP PUBLISHING** |
| **8** | **1** |  | DESKTOP PUBLISHING | By the end of the lesson, the learner should be able to* Define DTP S/W
* State then purpose of DTPS/W
 | * Q/A Demonstration practical
 | * Clip art
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 132-134
 |  |
|  | **2-3** |  | DESIGNING A PUBLICATION | By the end of the lesson, the learner should be able to* Explain the DTP S/W
* Discuss the types of DTP publications
 | * Q/A Observation Practical
 | * Letters
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 133-134
 |  |
| **9** | **1** |  | DESIGNING A PUBLICATION | By the end of the lesson, the learner should be able to* Run the DTP program
* Explain the DTP screen layout
 | * Q/A discussion
 | * Cards, certificates, text, calendars, text books
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 134-136
 |  |
|  | **2-3** |  | DESIGNING A PUBLICATION | By the end of the lesson, the learner should be able to* Set up a publication
* Manipulate text and graphics
 | Q/A demonstration practical | * Cards, certificates, text calendars, textbooks
* Working Computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 139-143
 |  |
| **10** | **1** |  | TEXT | By the end of the lesson, the learner should be able to* Design page layout
* Use a ruler to measure
 | * Q/A discussion
 | * Calendars, textbooks
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 158
 |  |
|  | **2-3** |  | GRAPHICS | By the end of the lesson, the learner should be able to* Define the term graphics
* Change full stroke
* Reshape objects
 | * Q/A Demonstration practical
 | * Books
* Handouts
* Working Computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 150
 |  |
| **11** | **1** |  | GRAPHICS | By the end of the lesson, the learner should be able to* Copy an object
* Import and wrap text
 | * Q/A Demonstration Practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 161-162
 |  |
|  | **2&3** |  | GRAPHICS | By the end of the lesson, the learner should be able to* Group objects
* Lock objects
 | * Q/A Demonstration Practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 164-168
 |  |
| **12/13** | **1** |  | ROTATE/CROP | By the end of the lesson, the learner should be able to* Explain the terms, sort, filter, total, forms
* Apply the above features
 | * Q/A Demonstration practical
 | * Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 164
 |  |
|  | **THE SCHOOL CLOSES/END OF TERM EXAMS** |
|  |
| **COMPUTER FORM 1 SCHEMES OF WORK – TERM 1** |
| **INTERNET AND E-MAIL** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | Reporting from home and settling for the first term work |
| **2** | **1** |  | INTERNET AND E-MAIL | By the end of the lesson, the learner should be able to* Define the term internet
* Explain the development of internet
 | * Q/A discussion
* Demonstration
* observation
 | * internet
* Text book
* Working Computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 168-169
 |  |
|  | **2-3** |  | IMPORTANCE OF THE INTERNET | By the end of the lesson, the learner should be able to* Explain the importance of the internet
 | * Q/A demonstration practical
 | * Handouts
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 266-275
 |  |
| **3** | **1** |  | INTERNET CONNECTIVITY | By the end of the lesson, the learner should be able to* Define the internet connectivity
* Explain elements of IC
 | * Q/A Demonstration Practical
 | * Handouts
* Books
* Modem S/W
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 273-276
 |  |
|  | **2-3** |  | INTERNET SERVICES | By the end of the lesson, the learner should be able to* Explain the internet services
 | * Q/A Demonstration Practical
 | * Letters
* Cards
* Books
* computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 273-276
 |  |
|  | **1** |  | ACCESSING INTERNET | By the end of the lesson, the learner should be able to * Log in/Sign in
* Surf/browse
 | * Q/A Demonstration practical
 | * Web pages
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 279
 |  |
| **4** | **2-3** |  | HYPER LINKS AND SEARCH ENGINES | By the end of the lesson, the learner should be able to* Define the term search engine
* Use search engines
 | * Q/A Demonstration practical
 | * Letters
* Card
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 177-179
 |  |
| **5** | **1** |  | ELECTRONIC MAIL | By the end of the lesson, the learner should be able to* Explain the term e-mail
* Discuss the use of email s/w
 | * Q/A Demonstration practical
 | * Handouts
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 178-180
 |  |
|  | **2-3** |  | E-MAIL | By the end of the lesson, the learner should be able to* State the e-mail facilities
* Compose mails
* Check mails
 | * Q/A Demonstration practical
 | * Books
* Web pages
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 30-37
 |  |
| **6** | **1** |  | E-MAIL | By the end of the lesson, the learner should be able to* Manipulate an e-mail
 | * Q/A Demonstration practical
 | * Handouts
* Books
* Web pages
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 180
 |  |
|  | **2-3** |  | SET-UP | By the end of the lesson, the learner should be able to* Fax e-mail
* Attach files
 | * Q/A Demonstration practical
 | * Websites
* Web pages
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 181-182
 |  |
| **7** | **1** |  | TEL MESSAGING | By the end of the lesson, the learner should be able to* Explain the term tel messaging
* Develop contact mgt
 | * Q/A Demonstration practical
 | * Handouts
* Web pages
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 181-182
 |  |
|  | **2-3** |  | EMERGING ISSUES | By the end of the lesson, the learner should be able to* Explain the emerging issues
* Search for the emerging issues in the net
 | * Q/A Demonstration practical
 | * Websites
* Web pages
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 182-183
 |  |
| **8** | **1** |  | GRAPHICS | By the end of the lesson, the learner should be able to* Define the term graphic
* Insert/edit graphics
 | * Q/A Demonstration practical
 | * Web sites
* Web pages
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 44-49
 |  |
|  | **2-3** |  | G. DATA SECURITY AND CONTROLS | By the end of the lesson, the learner should be able to* Define the term data security
* Identify security threats on ICT
 | * Q/A Demonstration practical
 | * Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 185-186
 |  |
| **9** | **1** |  | CONTROL MEASURES | By the end of the lesson, the learner should be able to* Discuss the control measures on ICT
 | * Q/A discussion
 | * Internet
* Books
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 186-188
 |  |
|  | **2-3** |  | COMPUTER CRIMES | By the end of the lesson, the learner should be able to* Define the term computer crimes
* Explain the computer crimes
 | * Q/A Demonstration Practical
 | * Books
* Internet
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 188-190
 |  |
| **10** | **1** |  | ICT PROTECTION | By the end of the lesson, the learner should be able to* Discuss ICT protection measures
 | Q/A Demonstration practical | * Books
* Internet
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 190-193
 |  |
|  | **2-3** |  | LAWS OF ICT | By the end of the lesson, the learner should be able to* Define the terms ethics
* Explain the ethical issues
 | * Q/A demonstration practical
 | * Books
* Internet
* Handouts
* Books
* Working computer
 | * Computer studies by S.John Onunga page 327-328
 |  |
| **11** | **1** |  | ICT LEGISLATION | By the end of the lesson, the learner should be able to * Discuss ICT laws
 | * Q/A discussion
 |  | * Computer studies by S.John Onunga page 328-331
 |  |
|  | **2-3** |  | WORKSHEET FORMATTING | By the end of the lesson, the earner should be able to* Format a w/sheet: text, numbers, rows, columns and global
 | * Q/A Demonstration practical
 | * Books
* Handouts
* Working computer
 | * Longhorn Computer studies Secondary. S.Mburu, G. Chemwa page 190-193
 |  |
|  | **SCHOOLS CLOSES END OF YEAR** |
|  |
| **COMPUTER FORM 3 SCHEMES OF WORK – TERM 1** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** | Data Representation in a computer | DEFINITION & INTRODUCTION | By the end of the lesson, the learner should be able to* Define data
* Define information
* Classify computers according to functionality with illustration
 | * Questions and answers
* Discussions in groups
* brainstorming
 | * computer keyboard
* electronic circuits
* Charts
* Photographs
* Pictures from books
 | * Longhorn Computer studies Bk 3 page 1-3
* Computer studies by Onunga and Shah page 1
 |  |
|  | **2** |  |  DATA REPRESENTATION | By the end of the lesson, the learner should be able to* Represent data in digital computers
1. On electronic circuits
2. On magnetic media
3. Optical media
 | * Discussions in groups
* Exercises by the teacher
 | * Charts
* Floppy diskettes
* Compact disk
* Electronic circuit
 | * Longhorn Computer studies Bk 3 page 23
* Computer studies by Onunga and Shah page 1
 |  |
|  | **3-4** | Data Representation | DATA REPRESENTATION | By the end of the lesson, the learner should be able to* Give reasons why binary system is used in computers
* Define bits, bytes, nibble and word
 | * Discussions
* Question and answer
 | * charts
 | * Longhorn Computer studies Bk 3 page 24
* Computer studies by Onunga and Shah page 1
 |  |
| **2** | **1** | Data Representation | NUMBER SYSTEMS | By the end of the lesson, the learner should be able to* Define decimal number
* Represent data in decimal number system
* Represent data in actual number system
 | * Group discussions
* Exercises given and marked by the teacher
 | * Charts
* Simple calculations
 | * Longhorn Computer studies Bk 3 page 25
* Computer studies by Onunga and Shah page 6
 |  |
|  | **2** |  | NUMBER SYSTEM | By the end of the lesson, the learner should be able to* Represent data in actual number system
* Represent data in Hexadecimal number system
 | * Group discussions
* Questions and answering
* exercises
 | * charts
* simple calculations
* Computer
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 7-8
 |  |
|  | **3/4** | **QUIZ AND PROBLEM SOLVING****Teacher administers small assignment and revises for better retention**  |  |  |  |
| **3** | **1** | Data representation | FURTHER CONVERSION OF NUMBER SYSTEMS | By the end of the lesson, the learner should be able to* Convert binary number to decimal number system
* Convert decimal numbers to binary numbers
 | * Questions and answers
* Discussions in groups
 | * Charts
* Simple calculations
* Questions papers
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 8
 |  |
|  | **2** | “ | “ | By the end of the lesson,, the learner should be able to* Convert binary fraction to decimal number system
* Convert a decimal fraction to binary
 | * Discussions
* Questions and answers
 | * Charts
* Simple calculations
* Questions papers
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page
 |  |
|  | **3-4** | **PROBLEM SOLVING AND QUIZ****Teacher administers questions and answer session for better retention**  |  |  |
| **4** | **1** | DATA REPRESENTATION | Converting octal numbers to decimal and binary numbers | By the end of the lesson, the learner should be able to* Convert octal numbers to decimal numbers
* Convert octal numbers to binary numbers
 | * Discussion
* Question and answer
 | * Chart
 |  * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 12
 |  |
|  | **2** | DATA REPRESENTATIONS | Converting hexadecimal numbers to binary number | By the end of the lesson, the learner should be able to* Convert hexadecimal to decimal numbers
* Convert hexadecimal numbers to binary numbers
 | * Discussions
* Question and answer
 | * Charts
* Simple calculations
* Computers
* Scientific calculators
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 13-15
 |  |
| **3-4** | **QUIZ AND PROBLEM SOLVING** **Can be inform of a question/answer session for retention** |
| **5** | **1** | DATA REPRESENTATIONS | Symbolic Representation using coding schemes | By the end of the lesson, the learner should be able to* Explain the binary coded decimal code as a representation Scheme (BCD)
* Explain the extended Binary coded decimal interchange code (EBCDIC)
 | * Discussions
* Question and answer
 | * Charts
* Scientific Calculators
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 22-27
 |  |
|  | **2** | DATA REPRESENTATION | Symbolic Representation using coding schemes | By the end of the lesson, the learner should be able to* Explain the American standard code for information interchange code (ASCII) as a representation scheme
 | * Discussion in groups
 | * Charts
* Scientific and simple calculator
* computer
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 22-27
 |  |
|  | **3-4** | **QUIZ FOR TETENTION****Administer a small exam** |
| **6** | **1** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to* Represent signed binary numbers using prefixing an extra sign bit to a binary number and ones complement
 | * Teacher demonstrates
* Group discussions
* Questions and answering
 | * Simple calculators
* PDA’s
* charts
 | * Longhorn Computer studies Bk 3 page 27
* Computer studies by Onunga and Shah page 27
 |  |
|  | **2** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to* Represent signed binary numbers using two’s complement
 | * Teachers demonstrates
* Question and answer
* Group discussions
 | “ | * Longhorn Computer studies Bk 3 page 27
* Computer studies by Onunga and Shah page 27
 |  |
|  | **3-4** |  | BINARY ADDITION | By the end of the lesson, the learner should be able to* Perform seven possible binary additions
* Outline the procedure for binary additions
 | * Demonstration by the teacher
* Teacher gives and marks questions
* Group discussions
 | * Charts
 | * Longhorn Computer studies Bk 3 page 27
* Computer studies by Onunga and Shah page 27
 |  |
| **7** | **1** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to* Perform direct subtraction
* Perform subtraction using ones complement
 | * Discussions
* Demonstration by teacher
* Question and answer
 | * Charts
* calculator
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 28
 |  |
|  | **2** |  | BINARY ARITHMETIC OPERATIONS | By the end of the lesson, the learner should be able to * Perform subtraction using twos complement
 | * Discussions
* Demonstration by teacher
* Question and answer
 | * Charts
* calculator
 | * Longhorn Computer studies Bk 3 page 26
* Computer studies by Onunga and Shah page 28
 |  |
|  | **3-4** | **QUIZ AND PROBLEM SOLVING****Teacher evaluates by giving questions to ascertain whether objectives are achieved** |  |  |
| **8** | **1** | Data Processing | DEFINITION AND INTRODUCTION | By the end of the lesson, the learner should be able to* Define data information and data processing
* Describe the data processing cycle
* Give methods of data collection
 | * Group discussions
* Question and answering
* brainstorming
 | * charts
* computer
 | * Longhorn Computer studies Bk 3 page 32
* Computer studies by Onunga and Shah page 32-35
 |  |
|  | **2** | Data Processing | DATA PROCESSING CYCLE | By the end of the lesson, the learner should be able to* List stages for data processing
* Describe the listed data processing cycle stage
 | * Group discussions
* Question and answering
* Brainstorming
 | * charts
* computer
 | * Longhorn Computer studies Bk 3 page 32
* Computer studies by Onunga and Shah page 32-35
 |  |
|  | **3-4** | Data Processing | DATA PROCESSING CYCLE | By the end of the lesson, the learner should be able to* Give the errors that influence the accuracy of data and information output
* Explain the errors in data processing
 | * Discussion in groups
* Question and answer
* Assignments marked by the teacher
 | * Flash cards
* Charts
* computer
 | * Longhorn Computer studies Bk 3 page 35
* Computer studies by Onunga and Shah page 33
 |  |
| **9** | **1** | Data processing | DATA INTEGRITY | By the end of the lesson, the learner should be able to* Define data integrity
* Give the measurements of data integrity
* Accuracy
* Timelines
* Relevance
* Describe the listed data integrity measurements
 | * Discussion in groups
* Illustrations by the teacher
* Question and answer
 | * Flash cards
* Simple information system
 | * Computer studies by Onunga and Shah page 41
 |  |
|  | **2** | Data processing | DATA PROCESSING METHODS | By the end of this lesson, the learner should be able to* State the ways of minimizing threat to data integrity
* List and describe the methods of data processing
 | * Discussion in groups
* Illustrations by the teacher
* Question and answer
 | * Flash cards
* Simple information system
 | * Computer studies by Onunga and Shah page 41
 |  |
|  | **3-4** | Data processing | COMPUTER FILES | By the end of the lesson, the learner should be able to* Define a computer file
* Give the types of computer files
* State the advantages of computerized filing
 | * Discussion in groups
* Illustrations by the teacher
* Question and answer
 | * Charts
 | * Computer studies by Onunga and Shah page 49
 |  |
| **10** | **1** | Data processing | ELEMENTS OF COMPUTER FILE | By the end of the lesson, the learner should be able to* List the elements of a computer file
* Describe the listed elements of a computer file
 | * Discussion in groups
* Question and answer
* demonstration
 | * database
* chart with relation database
 | * Longhorn Computer studies Bk 3 page 40
 |  |
|  | **2** | Data processing | CLASSIFICATION OF COMPUTER FILES | By the end of the lesson, the learner should be able to* Classify computer files
* Differentiate between logical and physical computer files
 | * Illustration by the teacher
 | * Floppy diskette
* Compact disc
* Computer video tape
 | * Longhorn Computer studies Bk 3 page 41
* Computer studies by Onunga and Shah page 50
 |  |
|  | **3-4** | Data processing | COMPUTER PROCESSING FILES | By the end of the lesson, the learner should be able to* Give the types of processing files
* Describe the listed types of processing files
* Master files
* Transaction file
* Reference files
* Backup files
* Sort files
 | * Discussions
* Illustration by the teacher
* Question and answer
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 41
 |  |
| **11** | **1** | Data processing | FILE ORGANIZATION METHODS | By the end of the lesson, the learner should be able to* Define file organization
* List the methods of organizing files on a storage media
* Describe the listed methods of file organization
 | * Question and answer
* Brainstorming
* Discussions in groups
 | * Floppy diskettes
* Compact disk
* Video tapes
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 42
* Computer studies by Onunga and Shah page 55
 |  |
|  | **2** | Data processing | ELECTRONIC DATA PROCESSING | By the end of the lesson, the learner should be able to* Give the data processing modes
* Describe
1. Online processing
2. Real-time processing
3. Distributed processing
 | * Discussions in groups
* Question and answer
* Illustration by the teacher
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 43-45
* Computer studies by Onunga and Shah page 61
 |  |
|  | **3-4** | Data processing | ELECTRONIC DATA PROCESSING MODES | By the end of the lesson, the learner should be able to* Describe
1. Time- sharing
2. Batch processing
3. Multi processing
4. Multi-tasking
5. Interactive processing
 | * Discussions in groups
* Question and answer
* Illustration by the teacher
 | * Charts
* Flash cards
 | * Computer studies by Onunga and Shah page 612-69
 |  |
|  | **12-13** | **END OF TERM EXAMS AND CLOSING OF SCHOOL** |
|  |
| **COMPUTER FORM 3 SCHEMES OF WORK – TERM 2** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | DEFINITION OF PROGRAMMING | By the end of this lesson, the learner should be able to* Define programming
* List the terms used in programming
* Describe the listed terms
* Differentiate between source program and object program
 | * Question and answer
* Discussion in groups
* Illustration by the teacher
 | * Charts
* Books
* Journals
* Software
* computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 47
* Computer studies by Onunga and Shah page 72
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | LEVELS OF PROGRAMMING LANGUAGE | By the end of the lesson, the learner should be able to* Classify the programming languages
* Describe the low level programming language
 | * Demonstration
* Q/A
 | * Flash cards
* Charts
* books
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 49-51
* Computer studies by Onunga and Shah page 73
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | LEVELS OF PROGRAMMING LANGUAGE | By the end of the lesson, the learner should be able to* Describe the high level language
* State the advantages and disadvantages of low-level and high level languages
 | * Q/A
* Discussion
 | * Flash cards
* Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 59
* Computer studies by Onunga and Shah page 74-75
 |  |
| **2** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DEVELOPMENT | By the end of the lesson, the learner should be able to* List the stages in program development
* Describe
1. program recognition
2. program definition
 | * Question and answer
* Discussion in groups
 | * Flash cards
* charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 60-66
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DEVELOPMENT | By the end of the lesson, the learner should be able to * Describe
1. Program design
2. Program coding
 | * Demonstration
* Illustrations by teacher
 | * Computer software
 | * Computer studies by Onunga and Shah page 83
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DEVELOPMENT | By the end of the lesson, the learner should be able to* Describe
1. program testing
2. Program implementation and maintenance
 | * Discussions in groups
* Illustrations by the teacher
* Question and answer
 | * Flash cards
* charts
 | * Computer studies by Onunga and Shah page 85
 |  |
| **3** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM DOCUMENTATION | By the end of the lesson, the learner should be able to* Define the term program documentation
* State the forms of documentation
* Describe the target groups for documentation
 | * Discussions in groups
* Illustrations by the teacher
* Question and answer
 | * Chalkboard
* charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 67
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | DEVELOPMENT OF ALGORITHMS  | By the end of the lesson, the learner should be able to* Define algorithm
* List tools used in algorithm
* Distinguish between pseudo code and flow charts
 | * Discussion in groups
* Question and answer
* Illustration by the teacher
 | * Chalkboard
* Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 68
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | DESIGNING MORE COMPLEX ALGORITHMS | By the end of the lesson, the learner should be able to* Give comparison between a pseudo code and a flow chart
* Design complex algorithms
 | * Question and answer
* Demonstration by the teacher
* Group discussions
 | * Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 68
 |  |
| **4** | **1** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM CONTROL STRUCTURES | By the end of the lesson, the learner should be able to* Define program control structures
* List three control structures
* Describe sequence as a control structure
 | * Discussions in groups
 | * Charts
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 72-78
* Computer studies by Onunga and Shah page 93
 |  |
|  | **2** | ELEMENTARY PROGRAMMING PRINCIPLES | PROGRAM CONTROL STRUCTURES | By the end of the lesson, the learner should be able to* Describe the use of iteration (looping) as a control structure
 | * Discussion in groups
 | * Charts
* chalkboard
 | * Computer studies by Onunga and Shah page 94
 |  |
|  | **3-4** | ELEMENTARY PROGRAMMING PRINCIPLES | Program control structures | By the end of the lesson, the learner should be able to* Describe selection as a control structure
* Design a more complex algorithm
 | * Illustration by the teacher
* Discussion in groups
* Question and answer
 | * Chart
* chalkboard
 | * Computer studies by Onunga and Shah page 94
 |  |
| **5** | **1** | **PROBLEM SOLVING** |  |  |  |
|  | **2** | SYSTEM DEVELOPMENT | Definition | By the end of the lesson, the learner should be able to* Define the term system
* Describe a system list
* List the characteristics of a system
 | * Discussion
* Question and answer
 | * Charts
* Chalkboard
* Journals
* Computer
* books
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 91-95
* Computer studies by Onunga and Shah page 168
 |  |
|  | **3-4** | SYSTEM DEVELOPMENT | Information system | By the end of the lesson, the learner should be able to* Describe the listed characteristics of a system
* Define information system
 | * Discussion in groups
* Illustration by the teacher
 | * Charts
* Flash cards
* Chalkboard
* Computer
* Books
 | * Computer studies by Onunga and Shah page 170
 |  |
| **6** | **1** | SYSTEM DEVELOPMENT | Information system | By the end of the lesson, the learner should be able to* State the main purpose of an information system
* Give reasons why information system is developed
* State the role of information system analyst
 | * Discussion
* Illustrations by the teacher
* Question and answer
 | * Charts
* Flash cards
* Computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 95
 |  |
|  | **2** | SYSTEM DEVELOPMENT | Theories of system development | By the end of the lesson, the learner should be able to* Describe tradition approach
* Describe rapid application development
 | * Discussions in groups
* Illustration by the teacher
 | * Chalk board
* Flash cards
* Charts
 | * Computer studies by Onunga and Shah page 170
 |  |
|  | **3-4** |  | Theories of system development | By the end of the lesson, the learner should be able to* Describe the structured approach
* Give examples of ways of information of gathering
 | * Discussions in groups
* Illustration by the teacher
 | * Chalk board
* Flash cards
* Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 97
 |  |
| **7** | **1** | SYSTEM DEVELOPMENT | Stages of system development | By the end of the lesson, the learner should be able to* State and define all the stages of system development
 | * Illustration by the teacher
* Question and answer
 | * Chalk board
* charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 97
 |  |
|  | **2** | SYSTEM DEVELOPMENT | Stages of system development | By the end of the lesson, the learner should be able to* Give the methods used in information gathering
* Describe interviews studying of available documents as used in information gathering
 | * Demonstration
* Discussion
 | * Chalk board
* Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 100-104
* Computer studies by Onunga and Shah page 175
 |  |
|  | **3-4** | SYSTEM DEVELOPMENT | Stages of system development | By the end of the lesson, the learner should be able to* Prepare a questionnaire
* Prepare and present a fait finding report
* Describe how automated methods are used
 | * Discussions in groups
* Question and answer
* Illustration by the teacher
 | * Sample questionnaire
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 104
 |  |
| **8** | **1** | SYSTEM DEVELOPMENT | Requirements specification | By the end of the lesson, the learner should be able to* Describe output specification
* Describe input specification
 | * Discussions
* Question and answer
 | * Chalkboard
* Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 105
 |  |
|  |  | SYSTEM DEVELOPMENT | Requirements specification | By the end of the lesson, the learner should be able to* Describe file/data stores
* Describe hardware and software requirements
 | * Discussions
* Question and answer
 | * Chalkboard
* Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 109
 |  |
|  |  | SYSTEM DEVELOPMENT | System design | By the end of the lesson, the learner should be able to* Define system flowchart
* Identify common flowchart symbols
 | * Discussions
* Question and answer
 | * Chalkboard
* Charts
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 109
 |  |
| **9** | **1** | SYSTEM DEVELOPMENT | Designing a system flowchart | By the end of the lesson, the learner should be able to* Identify guidelines fro designing system flowcharts
* Write a system flowchart using a case study
 | * Discussions
* Question and answer
* Illustration by the teacher
 | * Charts
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 110
 |  |
|  | **2** |  | Designing a system flowchart | By the end of the lesson, the learner should be able to* Write a simple book borrowing module flowchart
* Write cleaners information system flowchart
 | * Illustration by the teacher
* Discussion in groups
 | * Charts
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 110
 |  |
|  | **3-4** |  | Designing a system flowchart | By the end of the lesson, the learner should be able to* Write a sample library books management system flowchart
* Use data flow diagrams
 | * Question and answer
* Discussion in groups
 | * Chalkboard
* chart
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 110
 |  |
| **10** | **1** | SYSTEM DEVELOPMENT | System Construction | By the end of the lesson, the learner should be able to* Define the term system construction
* Identify number of technique that can be used to construct a designed system
 | * Question and answer
* Discussion in groups
 | * Charts
* Chalkboard
* Information system (Cleaner)
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 110
 |  |
|  | **2** |  | System Implementation | By the end of the lesson, the learner should be able to* Define system implementation and file conversion
* Describe factors considered during file conversion
 | * Illustrations by the teacher
* discussion
 | * Charts
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 116
 |  |
|  | **3-4** |  | Change over strategies | By the end of the lesson, the learner should be able to* Define the term changeover
* List the system change over strategies
* Describe three listed changeover strategies
 | * Discussions
* Question and answer
 | * Flash card
* Charts
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 116
 |  |
| **11** | **1** |  | System maintenance and revision | By the end of the lesson, the learner should be able to* Define system maintenance
* Define system review
* Describe security control measures
 | * Illustration by the teacher
* Question and answer
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 116
 |  |
|  | **2** |  | System documentation | By the end of the lesson, the learner should be able to* Write a report on case study
 | * Illustration by the teacher
* Question and answer
 | * Charts
* Flash cards
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 117
 |  |
|  | **3-4** |  | System documentation | By the end of the lesson, the learner should be able to* Develop a system using a case study
 | * Illustration by the teacher
* Discussions
 | * A chart
* Computer
* Printer
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 117
 |  |
| **12** | **1** |  | System documentation | By the end of the lesson, the learner should be able to* Identify comprehensive system documentation details
* Write a report on the case study
 | * Discussions
* Question and answer
 | * Charts
* Computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 118-120
 |  |
|  | **2,3& 4** |  | **PRACTICALS** |  |  |
| **END OF TERM EXAMINATION** |
|  |
| **COMPUTER FORM 3 SCHEMES OF WORK – TERM 3** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | **1** | PROGRAMMING WITH VISUAL AIDS | Definition  | By the end of the lesson, the learner should be able to* Define the term visual basic
* Start up visual basic
* Identify features of visual basic
 | * Demonstration by the teacher
* Discussions
* Question and answer
 | * Chalkboard
* Computer
* chart
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 122
 |  |
|  | **2** | PROGRAMMING | Visual basic toolbox | By the end of the lesson, the learner should be able to* Identify parts of the visual basic tool box
* Describe parts of the visual basic toolbox
 | * Demonstration
* Question and answer
 | * Chalkboard
* Photograph
* computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 123
 |  |
|  | **3-4** |  | Saving a visual project | By the end of the lesson, the learner should be able to* Save a visual basic project
* Open an existing visual basic project
 | * Demonstration by the teacher
* Question and answer
* Practical
 | * Computer
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 123
 |  |
| **2** | **1** |  | Visual basic fundamental concepts | By the end of the lesson, the learner should be able to* Identify the visual basic fundamental concepts
* Describe the listed fundamental concepts
 | * Discussions
* Questions and answer
 | * Chalkboard
* Charts
* Computer
* Simple calculators
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 136
 |  |
|  | **2** |  | Mathematical operators | By the end of the lesson, the learner should be able to* Identify mathematical operators
* Describe the listed mathematical operators
 | * Discussions
* Question and answers
 | * Chalkboard
* Charts
* Computer
* Simple calculators
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 137
 |  |
|  | **3-4** |  | Numeric strings and values | By the end of the lesson, the learner should be able to* convert a numeric string to a value
* Convert a value to a string
 | * Illustrations by the teacher
* Discussions
* Question and answer
 | * Charts
* computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 137
 |  |
| **3** | **1** |  | Project developments | By the end of the lesson, the learner should be able to* Create a program used to calculate the area of a rectangle
 | * Discussion in groups
* Illustrations by the teacher
 | * Charts
* Computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 145
 |  |
|  | **2** |  | Project developments | By the end of the lesson, the learner should be able to* Write a program used to find roots of a quadratic expression
 | * Discussion in groups
* Illustrations by the teacher
 | * Charts
* Computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 147
 |  |
|  | **3-4** |  | Case constructLooping construct | By the end of this lesson, the learner should be able to* Use case statement that can display the name of a weekday when its number is provided
* Write a program using do-loop
* Write a program using FOR-NEXT LOOP
 | * Demonstration by the teacher
* Discussion
* Question and answer
 | * Chart
* Chalkboard
* Computer
* printer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 147
 |  |
| **4** | **1** |  | Working with graphical objects | By the end of the lesson, the learner should be able to* Insert a picture using picture box
* Define module and procedure
* Declare general subroutines
 | * Demonstration
* Question and answer
* discussion
 | * chart
* computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 150
 |  |
|  | **2** |  | Working with graphical objects | By the end of the lesson, the learner should be able to* Write a general subroutine that solves y= xn given that the value of n are integers
 | * Demonstration
* Question and answer
* practical
 | * computer
* printer
* chart
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 151
 |  |
|  | **3-4** |  | Creating means and dialog boxes | By the end of the lesson, the learner should be able to* Create a dropdown menu
* Create a message and dialog boxes
 | * Demonstration
* Discussions
* Question and answers
 | * computer
* printer
* chart
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 151
 |  |
|  | **1** |  | List boxes and control boxes | By the end of the lesson, the learner should be able to* Define list box and combo box
* Create a list box and a combo box
* Create a project that loads a list of items
 | * Discussion
* Demonstration
* Practical
 | * Chart
* Photograph
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 161
 |  |
| **5** | **2** |  | Visual basic data structures | By the end of the lesson, the learner should be able to* Define the term arrays
* Declare an array
 | * Discussion
* Demonstration
* Practical
 | * Chart
* Photograph
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 163
 |  |
|  | **3-4** |  | Visual basic data structures | By the end of the lesson, the learner should be able to* Declare two dimensional arrays
* Write array of records
 | * Discussion
* Demonstration
* Practical
 | * Chart
* Photograph
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 161
 |  |
| **6** | **1** |  | Data files | By the end of the lesson, the learner should be able to* Define a file
* Identify types of files recognized by visual basic
* Link visual basic to data base
 | * Demonstration
* Practical
* Discussion
 | * Chart
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 187-189
 |  |
|  | **2** | INTRODUCTION TO DATA BASE DESIGN | Definition  | By the end of the lesson, the learner should be able to* Define database
* Identify relationships in database
 | * Demonstration
* Practical
* Discussion
 | * Chart
* Computer
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 187-189
 |  |
|  | **3-4** |  | Defining attributes | By the end of the lesson, the learner should be able to* Define a foreign key
* Distinguish between an entity and attributes
* Create one to many relationships
 | * Question and answer
* Practical
* Demonstration
* discussions
 |  * computer
* chart
* chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 203-204
 |  |
| **7** | **1** |  | File table structure | By the end of the lesson, the learner should be able to* Create a table
* Set primary key and foreign key
 | * Demonstration
* Discussion
* Practical
 | * Computer
* Chart
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 217
 |  |
|  | **2** |  | Enforcing Referential integrity  | By the end of the lesson, the learner should be able to* Enforce referential integrity between tables
* Normalize table
 | * Demonstration
* Discussion
* Practical
 | * Computer
* Chart
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 217
 |  |
|  | **3-4** |  | Forms and commands | By the end of the lesson, the learner should be able to* Create a form/ interface
* Call for commands
 | * Discussion in groups
* Demonstration
* Practical
* Question and answer
 | * Computer
* Chart
* Chalkboard
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 21o
 |  |
| **8** | **1** |  | Creating reports | By the end of the lesson, the learner should be able to* Describe the tools used to automate database
* Create a switchboard
 | * Discussion in groups
* Demonstration
* Practical
* Question and answer
 | * Chart
* computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 211
 |  |
|  | **2** |  | Automating database | By the end of the lesson, the learner should be able to* Describe the tools used to automate database
* Create a switchboard
 | * Discussion in groups
* Demonstration
* Practical
* Question and answer
 | * Chart
* computer
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 212
 |  |
|  | **3-4** |  | Automating database | By the end of the lesson, the learner should be able to* Create macros
* Develop a system using a case study
 | * Demonstration
* Assignment
 | * Computer
* Chart
 | * Longhorn Computer studies by Mburu and Chemwa Bk 3 page 212
 |  |
| **REVISION AND END TERM EXAMS** |
|  |
| **COMPUTER FORM 4 SCHEMES OF WORK – TERM 1** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | Reporting from home and settling for the first term |
| **2** | **1** |  | Definition of networking terms | By the end of the lesson, the learner should be able to* Define the term computer network
* Explain the term data communication
 | * Q/A discussion
 | * Newspaper
* Letters
* books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 1-5
* Computer studies by Onunga & Rena Shah Bk 4 page 1-5
 |  |
|  | **2-3** |  | Networking | By the end of the lesson, the learner should be able to* Explain the types of computer n/w
* Discuss the purpose of n/w
 | * Q/A demonstration practical
 | * Handouts
* Books
* Internet
* Working Pc
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 5-9
* Computer studies by Onunga & Rena Shah Bk 4 page 6
 |  |
|  | **4** |  |  | By the end of the lesson, the learner should be able to* Explain the demerits of n/w
 | * Q/A demonstration practical
 | * Twisted cables
* Internet 5
* Working pc
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 10-17
* Computer studies by Onunga & Rena Shah Bk 4 page 6
 |  |
| **3** | **1** |  | Elements of networking | By the end of the lesson, the learner should be able to* Discuss communication with cables
 | * Q/A demonstration practical
 | * Handouts
* Books
* Internet
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 17-22
* Computer studies by Onunga & Rena Shah Bk 4 page 9-11
 |  |
|  | **2-3** |  | Elements of networking | By the end of the lesson, the learner should be able to* Explain the types of wireless communication
 | * Q/A demonstration practical
 | * Books
* Internet
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 23-28
* Computer studies by Onunga & Rena Shah Bk 4 page 17-22
 |  |
| **4** | **1** |  | Communication Devices  | By the end of the lesson, the learner should be able to* Define the term communication devices
* Explain the work of: Modems, network cards, hubs
 | * Q/A demonstration practical
 | * Letters
* Software
* Working Pc
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 30-33
* Computer studies by Onunga & Rena Shah Bk 4 page 20
 |  |
|  | **2-3** |  | Network Software | By the end of the lesson, the learner should be able to* Discuss the different network s/w: O/S, protocols
 | * Q/A demonstration practical
 | * Handouts
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 30-31
 |  |
|  | **4** |  | Types of computer networks | By the end of the lesson, the learner should be able to* Discuss the three types of computer networks LAN,MAN, WAN
 | * Q/A demonstration practical
 | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 4-5
* Computer studies by Onunga & Rena Shah Bk 4 page 22
 |  |
| **5** | **1** |  | Network topologies | By the end of the lesson, the learner should be able to* Define the term network topology
* Differentiate btw. Logical and physical topologies
 | Q/A demonstration practical | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 33-34
* Computer studies by Onunga & Rena Shah Bk 4 page 16
 |  |
|  | **2-3** |  | Network Topologies | By the end of the lesson, the learner should be able to* Define the term network topology
* Differentiate between Logical and physical topologies
* Explain a star topology
 | * Q/A demonstration practical
 | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 35-36
* Computer studies by Onunga & Rena Shah Bk 4 page 18
 |  |
|  | **4** |  | Network Topologies | By the end of the lesson the learner should be able to* Explain a

Mesh TopologyTree Topology | * Q/A demonstration practical
 | * Working PC
* Handouts
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 37-38
* Computer studies by Onunga & Rena Shah Bk 4 page 19
 |  |
| **2. APPLICATION AREAS OF NFORMATION AND COMMUNICATION TECHNOLOGY** |
| **6** | **1** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain Application areas of ICT
* Financial system
 | * Q/A demonstration practical
 | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 37-39
* Computer studies by Onunga & Rena Shah Bk 4 page 27
 |  |
|  | **2-3** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain application areas of ICT in common system
 | * Q/A demonstration practical
 | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 40-41
* Computer studies by Onunga & Rena Shah Bk 4 page 27
 |  |
|  | **4** |  | Application of ICT | By the end of the lesson, the learner should be able to* Explain application areas of ICT in retail system
* Explain application areas of ICT in Reservation system
 | Q/A demonstration practical | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 40-59
* Computer studies by Onunga & Rena Shah Bk 4 page 28
 |  |
| **7** | **1** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain Application areas of ICT in Education
 | * Q/A demonstration practical
 | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 41-58
* Computer studies by Onunga & Rena Shah Bk 4 page 49
 |  |
|  | **2-3** |  | Application areas of ICT  | By the end of the lesson, the learner should be able to* Explain Application of ICT in Education System
 | * Q/A demonstration practical
 | * Internet
* Books
* Working
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 41-58
* Computer studies by Onunga & Rena Shah Bk 4 page 50
 |  |
|  | **4** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain Application areas of ICT in industrial System
 | * Q/A demonstration practical
 | * Internet
* Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 41-58
* Computer studies by Onunga & Rena Shah Bk 4 page 39
 |  |
| **8** | **Half Term** |
| **9** | **1** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain application areas of ICT in entertainment and virtual reality
 | * Q/A demonstration practical
 | * Internet
* Books
* Working Pc
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 61,64-65
* Computer studies by Onunga & Rena Shah Bk 4 page 51/55
 |  |
|  | **2-3** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain application areas of ICT in marketing and law enforcement
 | * Q/A demonstration practical
 | * Internet
* Books
* Working Pc
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 63
 |  |
|  | **4** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain application area of ICT in transportation system
 | * Q/A Discussion
 | * Internet
* Books
* Working Pc
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 44-46
* Computer studies by Onunga & Rena Shah Bk 4 page 47
 |  |
|  | **1** |  | Application areas of ICT | By the end of the lesson, the learner should be able to* Explain Application areas of ICT in Library System
 | * Q/A Discussion
 | * Internet
* Books
* Journals
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 44
 |  |
|  | **IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON SOCIETY** |
| **10** | **2-3** |  | Application areas of ICT in the society | By the end of the lesson, the learner should be able to* Discuss effects on
1. Employment
2. Automated production
 | * Q/A demonstration practical
 | * Letters
* Working PC
* Newspapers
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 44
 |  |
|  | **4** |  | Impact of ICT in the society | By the end of the lesson, the learner should be able to* Discuss effects if ICT on work’s health
* State the characteristics of future trends in ICT
* Discuss rapid evolution in ICT
 | * Q/A Discussion
 | * Handouts
* Journals
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 44
* Computer studies by Onunga & Rena Shah Bk 4 page 60
 |  |
| **11** | **1** |  | Impact of ICT in the society | By the end of the lesson, the learner should be able to* Discuss effects of ICT on
1. Environmental issues
2. Cultural effects
 | * Q/A Discussion
 | * Handouts
* Journals
* Videos
* Photographs
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 44
* Computer studies by Onunga & Rena Shah Bk 4 page 63
 |  |
|  | **2-3** |  | Evolution of computer systems | By the end of the lesson, the learner should be able to* Discuss Artificial intelligence
 | * Q/A Discussion
 | * Class Register
* Accounts book
* Journals
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 52-53
* Computer studies by Onunga & Rena Shah Bk 4 page 81
 |  |
|  | **4** |  | Evolution of Computer systems | By the end of the lesson, the learner should be able to* Explain expanded information superhighway
 | * Q/A Demonstration Practical
 | * handouts
* class register
* accounts
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 79-80
 |  |
|  |
| **COMPUTER FORM 4 SCHEMES OF WORK – TERM 2** |
| **CAREER OPPORTUNITIES IN ICT** |
| **WEEK** | **LESSON** | **TOPIC** | **SUB - TOPIC** | **OBJECTIVES** | **LEARNING/TEACHING ACTIVITIES** | **LEARNING/TEACHING RESOURCES** | **REFERENCES** | **REMARKS** |
| **1** | Reporting from home and settling for the first term work |
| **2** | **1** |  | Career opportunities in ICT | By the end of the lesson, the learner should be able to* Discuss the roles of a system analyst, a chief programmer
 | * Q/A Discussion
 | * Books
* Journals
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 79
* Computer studies by Onunga & Rena Shah Bk 4 page 95
 |  |
|  | **2-3** |  | Career opportunities in ICT | By the end of the lesson, the learner should be able to* Discuss functions of computer programmer and d/b administrator
 | * Q/A Demonstration Practical
 | * Books
* Handouts
* Newspapers
* Realia
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 81
* Computer studies by Onunga & Rena Shah Bk 4 page 97
 |  |
|  | **4** |  | Career Opportunities in ICT | By the end of the lesson, the learner should be able to* Discuss the functions of a s/w engineer and a computer engineer
 | * Q/A demonstration Practical
 | * Books
* Working PC
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 80
 |  |
| **3** | **1** |  | Career opportunities in ICT | By the end of the lesson, the learner should be able to* Discuss the function of a web designer, web administrator and computer operator
 | * Q/A demonstration Practical
 | * Books
* Handouts
* Journals
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 81
 |  |
|  | **2-3** |  | Career opportunities in ICT | By the end of the lesson, the learner should be able to* Discuss the function of computer technician and data processing manager
 | Learner toQ/A discussion | * Books
* Realia
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 78
 |  |
|  | **4** |  | Career opportunities in ICT | By the end of the lesson, the learner should be able to* Discuss other educational opportunities in the various institutions
 | * Q/A Discussion
 | * Books
* Newspapers
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 83-84
 |  |
| **4** | **1** |  | Identification of further Educational opportunities | By the end of the lesson, the leaner should be able to* Explain the different courses offered in universities, polytechnics, middle level colleges
 | * Q/A Discussion
 | * Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 83-84
* Computer studies by Onunga & Rena Shah Bk 4 page 106-110
 |  |
|  | **2-3** |  | Developing project using ms access d/baseDescription of a given system | By the end of the lesson, the learner should be able to* Identify a problem
* Definition of a problem
 | * Q/A discussion
 | * Books
* Sampled projects
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 83-84
* Computer studies by Onunga & Rena Shah Bk 4 page 106-112
 |  |
|  | **4** |  | Fact finding | By the end of the lesson, the learner should be able to:* Identify the number of manual documents that are needed for the system given
 | * Q/A observation
 | * Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 83-84
* Computer studies by Onunga & Rena Shah Bk 4 page 106-120
 |  |
| **5** | **1** |  | Fact finding | By the end of the lesson, the learner should be able to* Design a sample interview guideline for the system given
 | * Q/A practical
 | * Sampled projects
* Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 83-84
 |  |
|  | **2-3** |  | Fact finding | By the end of the lesson, the learner should be ale to* Design a sample questionnaire for the system giver
 | * Q/A practical
 | * Sampeled projects
* books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 93-94
* Computer studies by Onunga & Rena Shah Bk 4 page 122
 |  |
|  | **4** |  | System design* Preliminary design phase
 | By the end of the lesson, the learner should be able to* Identify the flowchart symbols
* Design a simple flowchart for the system
 | * Q/A practical
 | * Sampled projects
* Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 94-95
 |  |
| **6** | **1** |  | System design* Preliminary design phase
 | By the end of the lesson, the learner should be able to* Design a complex flowchart for the system
 | * Q/A practical
 | * Sampled projects
* Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 94-95
 |  |
|  | **2-3** |  | Detailed design | By the end of the lesson, the learner should be able to* Design the outputs for the system
 | Q/A practical | * Sampled projects
* Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 94-95
 |  |
|  | **4** |  | Detailed design | By the end of the lesson, the leaner should be able to* Design input interface for the system
 | * Q/A practical
 | * Sampled projects
* Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 96-100
 |  |
| **7** | **1** |  | Files and data stores design | By the end of the lesson, the learner should be able to* Design a database
 | * Q/A practical
 | * Sampled projects
* Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 100-101
 |  |
|  | **2-3** |  | Creating relationships | By the end of the lesson, the learner should be able to* Create relationships
 | * Q/A practical
 | * Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 103
 |  |
|  | **4** |  | Hardware and software requirements | By the end of the lesson, the learner should be able to* Identify h/w and s/w requirements for the system
 | * Q/A discussion
 | * Books
* Realia
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 103
 |  |
| **9** | **1,2,3,4** |  | Constructing information management system given* Designing inputs
 | By the end of the lesson, the learner should be able to* Design inputs
 | * practical
 | * internet
* sampled projects
* books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 86-153
 |  |
| **10** | **1,2,3,4** |  | Designing outputs | By the end of the lesson, the learner should be able to* Design outputs
 | * practical
 | * books
* internet
* sampled projects
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 86-153
 |  |
| **11** |  |  | * Designing
 | By the end of the lesson, the learner should be able to* Design various management systems
 | * practical
 | * Books
 | * Longhorn Computer studies by S.Mburu and C. Chemwa page 86-153
 |  |
| **12** | **1,2,3,4** | Writing end of term exams |
| **13** | **The school closes** |  |  |
|  |
| **COMPUTER FORM 4 SCHEMES OF WORK – TERM 3** |
| **1** | Reporting from home and settling for the third term work |
| **2-3** | POST MOCKS AND JOINTS |
| **4-7** | REVISION |
| **7** | K.C.S.E BEGINS |