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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. Chemwapg 1 * Foundations of Computer studies by Pepelapg 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. Chemwapg 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 Pepelapg 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 Pepelapg 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.MburuG.Chemwapg 21-23 | |  | |
| **6** | **1** | |  | KEYBOARD AND MOUSE SKILLS  KEYBOARD 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.MburuG.Chemwapg 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 Pepelapg 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 Pepelapg 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 Pepelapg 23-25 | |  | |
| **COMPUTER SYSTEM** | | | | | | | | | | | | | | | |
| **9** | **1** | |  | COMPUTER SYSTEMS  INPUT 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 Pepelapg 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.MburuG.Chemwapg 30-34 | |  | |
| **11** | **END TERM 1 EXAM** | | | | | | | | | | | | | | |
| **12** | **REVISION** | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **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 SYSTEMS  DIGITIZERS  SPEECH 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 Pepelapg 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.MburuG.Chemwapg 40 * Foundations of Computer studies by Pepelapg 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.MburuG.Chemwapg 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 Pepelapg 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 Pepelapg 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.MburuG.Chemwapg 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.MburuG.Chemwapg 48 | |  | |
|  | **2-3** | |  | TRENDS IN PROCESSORS TECHNOLOGY AND SPEED | | | * List processors   Type  Manufactures  Year 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.MburuG.Chemwapg 51-60 * Foundations of Computer studies by Pepelapg 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 Pepelapg 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.MburuG.Chemwapg 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 Pepelapg 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 Pepelapg 101 | |  | |
|  | **2-3** | |  | “” | | | * Mount hard drives and optical drives | | * Through teachers demonstration, mount hard drives and optical drives | | * Computer | * Foundations of Computer studies by Pepelapg 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 Pepelapg 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 Pepelapg 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 Pepelapg 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 Pepelapg 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 Pepelapg 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.MburuG.Chemwapg 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 to   1. 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 Pepelapg 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 Pepelapg 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.MburuG.Chemwapg 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 drop  Selecting multiple files and folders  Searching for files and folders | | * In group of two, manipulate files and folders using   Shortcut menu, drag and drop  Selecting multiple files and folders  Searching 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 Pepelapg 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.JohnOnunga 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.JohnOnunga 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 3 page 43-45 * Computer studies by Onunga and Shah page 61 | |  | |
|  | **3-4** | Data processing | | ELECTRONIC DATA PROCESSING MODES | | | Bythe 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 3 page 122 | |  | |
|  | **2** | | PROGRAMMING | | Visual basic toolbox | | Bythe 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 3 page 147 | |  | |
|  | **3-4** | |  | | Case construct  Looping 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 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 ChemwaBk 3 page 212 | |  | |
| **REVISION AND END TERM EXAMS** | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **COMPUTER STUDIES 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 Topology  Tree 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 to  Q/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 msaccess d/base  Description 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 | | | | | | | | | | | | | | |