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| **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 |  | |
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| **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** | | | | | | |  |  | |
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| **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 | | | | | | | | | |