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