INFORMATION TECHNOLOGY

GRADE 10

TOPIC: COMPUTER FUNDAMENTALS

OBJECTIVES

Students will be able to:

1. explain the concept of Information Technology
2. distinguish among the major types of computer systems *in terms of processing speed, storage and portability*
3. explain the functions of the major hardware components of a computer system
4. explain how the major hardware components of a computer system interrelate
5. evaluate the relative merits of cloud storage and local storage
6. select appropriate input/output devices to meet the needs of specified applications
7. explain the role of the different types of software in computer operation
8. discuss the relative merits of the various types of user interface
9. evaluate the suitability of a given computer system for a specific purpose
10. troubleshoot basic computer hardware problems

TOPIC: INFORMATION PROCESSING FUNDAMENTALS

OBJECTIVES

Students will be able to:

1. distinguish between data and information
2. evaluate the reliability of information obtained from online sources
3. differentiate between validation and verification of data
4. identify appropriate validation and verification checks given a particular scenario
5. select appropriate file organization for particular application

TOPIC: COMPUTER NETWORKS AND WEB TECHNOLOGIES

OBJECTIVES

Students will be able to:

1. distinguish among types of networks
2. explain the functions of the basic components of a network
3. assess the importance of mobile communication technologies as a component of modern communication networks
4. explain the interrelationship among key Web technology concepts

TOPIC: IMPLICATIONS OF MISUSE ANDCYBERSECURITY

OBJECTIVES

Students will be able to:

1. outline the concepts of computer security, cybersecurity and computer misuse
2. assess the potential impact of computer systems misuse based on the main entities impacted
3. describe suitable countermeasures to mitigate effects of identified threats

TOPIC: IMPACT ON JOB SKILLS AND CAREERS

OBJECTIVES

Students will be able to:

1. assess the effect of automation on job security
2. describe the roles of various personnel in computer-related professions
3. assess the impact of information and communications technology on select fields.

TOPIC: SPREADSHEETS

OBJECTIVES

Students will be able to:

1. explain the purpose of a spreadsheet
2. use appropriate terminologies and notions commonly associated with spreadsheets
3. use basic pre-defined systems functions
4. create advanced arithmetic formulae
5. replicate (copy) formulae into other cells

6. manipulate columns and rows

7. manipulate data in a spreadsheet

8. perform charting operations

9. manipulate one or more worksheets

TOPIC: DATABASE MANAGEMENT

OBJECTIVES

Students will be able to:

1. explain the concept of a database

2. use terminology commonly associated with a database

3. create a database

4. manipulate data in a database