THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION AND CULTURE

INFORMATION AND COMPUTER STUDIES SYLLABUS FOR SECONDARY SCHOOLS FORM I - IV

2005

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF EDUCATION AND CULTURE

INFORMATION AND COMPUTER STUDIES

SYLLABUS FOR SECONDARY SCHOOLS

FORM I - IV

2005

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Designed and prepared by:
Tanzania Institute of Education Dar es Salaam Tanzania.

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1 INTRODUCTION

This new INFORMATION AND COMPUTER STUDIES Syllabus for Form One to Form Four is a revised version, which has been prepared to replace that of 2002. The four years.

The revision process has observed a change in paradigm from content based to a competence based curriculum. The teaching and learning process using this reviewed syllabus should be student centred and activity oriented. Students are expected to be engaged in a variety of activities which culminated in learning. Moreover, the revision has also taken into consideration the requirements of the Secondary Education Development Plan (SEDP).

2 OBJECTIVES OF EDUCATION IN TANZANIA

The general aims and objectives of education in Tanzania are:

(a) to guide and promote the development and improvement of the personalities of the citizen of Tanzania, their human resources an4 effective utilization of those resources in bringing about individual and national development.

(b) to promote the acquisition and appreciation of the culture, customs and traditions of the people of Tanzania.

(c). to promote the acquisition and appropriate use of literacy, social, scientific, vocational, technological, professional and other forms of knowledge, skills and attitudes for the development and improvement of the condition of man and society.

(d) to develop and promote self-confidence and an inquiring mind, and understanding and respect for human dignity and human rights and readiness to work hard for self advancement and national development.

(e) to promote and expand the scope of acquisition, improvement and upgrading of mental, practical, productive and other skills needed to meet the changing needs of industry and the economy;

(f) to enable every citizen to understand and uphold the fundamentals of the National Constitution as well as the enshrined human and civic rights, obligations and its responsibilities.

(g) to promote love for work, self and wage employment and improved performance in the production and service sectors.

3 OBJECTIVES OF SECONDARY EDUCATION

In Tanzania, secondary education refers to post primary formal education offered to the learners who successfully complete seven years of primary education and have met the requisite entry qualifications.

The aims and objectives of secondary education are to:

(a) consolidate and broaden the scope of basic ideas, knowledge, skills and attitudes acquired and developed at the primary educational level.

(b) enhance the development and appreciation of national unity, identity and ethic, personal integrity, respect for human rights, cultural and moral values, customs traditions and civic responsibilities and obligations.

(c) promote linguistic ability and effective use of communication skills in Kiswahili and English.
(d) provide opportunities for the acquisition of knowledge, skills, attitudes and understanding in prescribed or selected fields of study.
(e) prepare students for tertiary and higher education, vocational, technical and professional training.
(f) inculcate a sense and ability for self-study, self-confidence and self-advancement in new frontiers of science and technology, academic and occupational knowledge and 7;' skills.
(g) prepare the students to become able members of the society.

4 GENERAL COMPETENCIES

By the end of the four years course, the student should have the ability to:
1. interpret organize and present information in a variety of forms.
2, use Information and Communication Technologies in data and information processing;
3. apply principles, knowledge and skills of information technology in daily life; 4, solve problems, using computers;
5. demonstrate willingness to keep abreast with current developments and issues related to everyday use of computers.

5 GENERAL OBJECTIVES

By the end of the four years course, the student should be able to:
1. demonstrate skills of data processing and interpretation of information.
2. appreciate the role of information technology in socio-economic and cultural development of the society.
3, develop awareness of the place of Information Technology in the society.
4. apply Information Technology knowledge and skills in daily life.
5. develop practical skills in the use of computers.
6. outline types of network~ ,nd security issu~s in a networked environment.

6 STRUCTURE AND ORGANIZATION OF THE SYLLABUS

This ICS syllabus has a slightly different structure compared to that of 2002. The following changes were added for improvement:

- General competences for the whole course.
- Competences for each level, i.e. Form One to Form Four.
- Suggested areas for assessment.
- Number of periods per sub-topic.

Also an extra column for subtopics has been added to the table of the syllabus content.

6.1 Class Level Competencies

Competences are skills, knowledge and attitudes attained by the learner after the learning

process. Competences have been stated for each class/level of ICS course. The class level objectives are derived from the class level competences.

6.2 Class Level Objectives

For each competence intended to be achieved, one or more objectives have been stated in order to achieve it. The general objectives for Form One to Form Four are stated in general terms to indicate the scope of content to be covered within each level.

6.3 Topics

Some topics in the 2002 ICS syllabus have been retained. Also some content from Cross-Cuning Issues (CCI), have been integrated. The topics have been derived from the class level competences and objectives.

- . Emphasis has been put on the logical arrangement of the topics, i.e from simple to most difficult.
- . A spiral arrangement has been adopted.
- . Spiral and clock arrangement have been adopted bearing in mind logical flow of the content.
- . Topics have been arranged to attain a logical order starting from the simple to the most difficult one. Both spiral and block arrangements of topics have been adopted.

6.4 Sub - Topic

Topics ~ave been divided into sub -topics. The sub-topics have been arranged to attain a logical order.

6.5 Specific Objectives

Each sub-topic has one or more specific objectives. These specific objectives are the expected outcomes in classroom instructions. They also reflect the process to attain competences within the cognitive, affective and psychomotor domains.

6.6 Teaching and Learning Strategies

The column of teaching and learning strategies indicates what the teacher and students are expected to be doing in the process of teaching and learning. Students are encouraged to work in small groups for maximum participatory and cooperative learning. The teacher shall assume the role of a facilitator to promote, guide and help students' learning activities. The whole teaching and learning process should be participatory and interactive, where the student learns by doing a series of logical activities.
These suggested teaching and .learning (T/L) strategies are not binding. The teacher and students may use any other learner - centred T/L strategy which suit the T/L strategy.

6.7 Teaching and Learning Resource

In the teaching of ICS a great variety of teaching- learning resources will be needed in quality and quantity. In case the commercial varieties of T/L resources are not available, the teacher should work with students to collect or improvise alternative resources available in the environment.

6.8 Assessment

For every specific instructional objective, there is/are some suggested questions or areas for assessment. Formative and summative assessments should be geared towards mastering attaining the competences developed within the course. .

6.9 Number of Periods

The column of number of periods is a proposal of duration to be used to teach a given sub-topic. The number of periods have been taken into account the time needed to adequately cover the sub-topic some topics need more time than others.

6.10 Instructional Time

This syllabus is to be covered in 40 weeks having approximately 194 instructional days per year including two weeks reserved for mid term and annual examinations. The number of periods for teaching this syllabus is 2 periods per week of fourty minutes each. The teacher is advised to make maximum use of time for classroom instruction. Lost instructional time should always be compensated.

Ricky A. Mpama
Chief Education Officer
Ministry of Education and Culture

FORM ONE

CLASS COMPETENCES

By the end of Form One course, the student should have ability to:
1. use information and communication media
2. use computer to process data and information
3. demonstrate skills of computer handling
4. use operating system to manage files and folders
5. use the knowledge of historical development of computers for advancement of the technology

CLASS OBJECTIVES

By the end of Form One, the student should be able to:
I. develop skills of using information and communication media.
2. apply skills of using different accessories of the computer to process data and information.
3. develop skills of computer handling..
4. develop skills of using operating systems.
5. analyse stages of computer evolution.

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
1 INFORMATION	**1.1 Concept of Information**	The student should be able to: 1 Define data	(i) Students to brainstorm about data. (ii) The teacher to summarize and conclude. (iii) Student to use summary to define data.	• Magazines, newspapers • Radio • Journal, TV	Can the student define data ?	5
		2 Relate data and information	(i) The teacher to lead students to discuss data and information (ii) Students to develop the relationship between data and information.	• Meetings • Public speeches • Press releases • Newspapers	Is the student able to associate information and data ?	
		3 Identify sources of information	(i) Students in groups to discuss sources of information. (ii) Students to present their findings. (iii) The teacher to clarify and conclude. (iv) Students to use the summary to identify sources of information	• Radio • Magazine • Journals • TV • Newspapers • Computer	Is the student able to identify the sources of information ?	
		4 State the importance of information	(i) The teacher to prepare case studies. (ii) Student to discuss case studies. (iii) The teacher to summarize and highlight the importance of information (iv) Students to use summary to state the importance of information.	• TV • Radio • Journal • Poster • Magazines • Newspaper • Banners	Is the student able to explain the importance of information ?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	1.2 Information dissemination	The student should be able to: 1 List the traditional ways of disseminating information	(i) The teacher to assign students to collect information from elders on traditional means of disseminating information such as songs, stories and poems. (ii) Students to present their findings to the class pleminary. (iii) The teacher to summarize and conclude. (iv) Studnets to use the summary to list the traditional ways of disseminating information.	• Horns • Whistle • Historical sites • Resource persons • Real objects	Is the student able to explain traditional ways of disseminating information ? Can the student list traditional ways of disseminating information ?	5
		2 List the modern ways of disseminating information.	(i) Students to brainstorm on modern ways of disseminating information (ii) The teacher to summarize and conclude. (iii) Student to use the summary to list the modern ways of disseminating information	• TV • Radio • Newspaper • Journal • Magazines • Books	Is the student able to explain modern ways of disseminating information ? Can student list modern ways of disseminating information ?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Compare modern and traditional ways of disseminating information	(i) The teacher to organize a class debate on the two ways of disseminating information. (ii) Students to debate and summarize key issues of the debate. (iii) The teacher to comments and conclude. (iv) Students to use the summary to draw similarities between moden and traditional ways of disseminating information.	• Whistle. • Horn • Drum • Magazine/Journals • Radio TV	Can student associate traditional and modern information?	
		4. Contrast modern and traditional ways of disseminating information	(i) The teacher to organize debate on differences between modern and traditional ways of disseminating information. (ii) Students to debate and summarize key issues (iii) The teacher to comment and conduce (iv) Students to use the summary to draw similarities between modern and traditional ways of disseminating information.	• Whistle • Horn • Drum • Magazine • Newsletter • TV • Radio	Is the student able to distinguish the difference of modern and traditional ways of disseminating information?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	1.3 Communication media	The student should be able to: 1. Describe the communication media.	(i) The teacher to lead discussion on meaning and type of media of communication. (ii) The teacher to summarize and conclude the discussion. (iii) Students to use the summary to describe communication media.	• Radio • TV • Magazines • Journal • Newspaper • Telephone	i) Can the student explain the meaning of media? ii) Can the student explain of communication? iii) Is the student able to explain communication media?	4
		2. Use communication media equipment	(i) The teacher to organize students in groups. (ii) The teacher to demonstrate how to operate radio and TV and telephone. (iii) Students to practise how to operate radio, TV and telephone.	• Magazine • Radio • Journal • Newspaper • Television • Telephones	Can the student use communication media?	
2.0 THE COMPUTER	2.1 Significance of computer	The students should be able to: 1. Define a computer	(i) Students to brainstorm about computer as a tool to simplify work and increase efficiency. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to develop definition of a computer.	• Computer • Handouts of computer illustrations.	Can the student define computers?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Explain the need for the computer	(i) The teacher to lead students to discuss the need for the computer in daily life. (ii) The teacher to summarize and conclude (iii) Students to use the summary to explain the need for the computer.	• Manila sheet • Computer • Marke pen • Posters showing the use of computers in education, Banks, hospitals, Libraries, Airports	Is the student able outline the need for the computer?	
	2.2 Hardware	The student should be able to: 1. Identify different parts of a computer	(i) The teacher to lead students to discuss hardware. (ii) The teacher to show various parts of computer hardware. (iii) Students to list different parts of a computer.	• Keyboard • Screen • Mouse • Hard Disk • CD-ROM drive • Manila sheet • Marker pen • Power cable • Data cable • Printer • System Unit • Speakers • Picture of different hardware • Computer visual chart	(i) Is the student able to list hardware parts? (ii) Is the student able to identify computer hardware?	3
		2. Explain the input, processing and output (IPO) as a method of computer operation.	(i) Students to brainstorm on the IPO as a method of computer operation. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to explain IPO as a method of computer operation.	• Flip char/Manila sheet • Marker pen	Is the student able to explain the input/process output of a computer?	
		3. Draw a computer block diagram	Students to draw computer block diagram.	• Flipchart/Manila Sheet • Marker Pen	Can the student draw computer block diagram?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	2.2.1 Input devices	The student should be able to 1. List common computer input devices	(i) The teacher to lead students in identifying various computer input devices. (ii) Students to list common computer input devices.	• Keyboard • Mouse • Scanner • Joystick • Graphic tablets • Digital Camera	Can the student list input devices	2
		2. Explain the function of input devices	(i) Students to brainstorm on the functions of input devices (ii) The teacher to summarize and conclude. (iii) Student to use the summary to explain the function of input devices.	• Keyboard • Mouse • Scanner • Joystick • Graphics tablets (graphics app) • Digital Camera	Is the student able to explain the functions of input devices	
		3. Connect input devices to the system unit.	(i) The teacher to demonstrate how to connect input devices to the computer. (ii) Students to practice how to connect input devices to the computer.	• System unit • Keyboard • Mouse • Scanner	Can the student connect input devices to the computer?	
	2.2.2 Central Processing Unit	The student should be able to: Explain Central Processing Unit	(i) The teacher to assign students in groups to investigate the function of human brain and computer. (ii) Students to present their findings. (iii) The teacher to summarize and conclude the discussion and relate to how CPU functions. (iv) Students to use the summary to explain CPU.	• Flipchart/Manila sheet • Marker pen • Pictures of Central processing unit • Picture of a human being	Is the student able to explain the central processing unit.	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Describe sections of CPU	(i) The teacher to lead the students through question and answer on the structure of CPU (ii) The teacher to summarize the discussion. (iii) Students to use the summary to describe sections of CPU.	• Flipchart/manila sheet • marker pen • Picture of a CPU	Is the student able to explain the sections of central processing unit?	
		3 List the functions of different parts of CPU	(i) The teacher to lead students in identifying functions of different parts of CPU. (ii) Students to list the functions of different parts of CPU.	• Wall socket • Power cable • Keyboard • Mouse • Scanner	Is the student able to explain the function of different parts of CPU? Can the student list the functions of different parts?	
	2.2.3 Output Devices	The student should be able to: 1. List output devices	(i) The teacher to lead students in identifying different Output devices. (ii) The teacher to summarize and conclude (iii) Students to use summary to list output devices.	• Monitor • Printer • Plotter • Flip chart • Handouts	Can the student list out put devices?	3
		2. Explain the functions of output devices	(i) The teacher to lead students to discuss the functions of output devices. (ii) The teacher to summarize and conclude. (iii) Student to use summary to explain the function of output devices.	• Flipchart • Monitor • Beam projector • Handout	Is the student able to explain the functions of output devices.?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Connect output devices to the system Unit.	(i) The teacher to demonstrate how to connect output devices to the system unit. (ii) Students in groups to discuss rules and regulations of connecting output devices to the system unit. (iii) Students to practice how to connect output devices to the system unit.	• Manila guides • Flip charts • Handout • Television • Tape recorder • Deck	Can the student connect out put devices to the computer?	
	2.2.4 Secondary Storage	1. Define secondary storage devices	(i) Students to brainstorm on the meaning of storage devices. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to develop definition of secondary storage.	• Floppy diskette • Flash disk • CD-ROM	Can the student define secondary storage devices?	3
		2. List secondary storage devices	(i) The teacher to lead students to identify secondary storage devices (ii) Students to list different storage devices.	• Manila sheet • Marker pen • CD-ROM drive • Floppy diskette	Is the student able to identify secondary stage devices? Can the student list secondary storage devices?	
		3. Explain the use of various secondary storage devices	(i) The teacher to lead students to discuss the uses of secondary storage. (ii) The teacher to summarize and conclude the discussion. (iii) Students to use the summary to explain the use various secondary storage devices.	• Floppy diskette • Flash disk • CD-ROM	Is the student able to explain use of various secondary storage devices?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		4. State advantages and disadvantages of different secondary storage devices.	(i) Students to brainstorm on the differences between primary and Secondary storage. (ii) The teacher clarify and conclude. (iii) Students to use the summary to distinguish primary and Secondary storage devices.	• Hardware specification labels • Computer manuals	Can the student differentiate primary and secondary storage devices?	
		5. Explain different capacity of secondary storage devices.	(i) Student to brainstorm in the advantages and disadvantages of different secondary storage devices. (ii) The teacher to clarify and summarize. (iii) Students to use the summary to state advantages and disadvantages of different secondary storage devices.	• Floppy/diskette • Flash disk • CD-ROM	Can the student explain advantages and disadvantages of secondary storage devices	2
		6. Distinguish between primary and secondary storage devices.	(i) The teacher to lead a discussion on capacity of secondary storage devices. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to explain different capacities of Secondary Storage devices.	• Hardware specification label • User guide	Is the student able to explain different capacity of secondary storage devices?	
3 COMPUTER SOFTWARE	3.1 Software Concepts	The student should be able to: 1. Define computer software	(i) The teacher to lead students to discuss the computer software. (ii) Students to develop the definition of computer software.	• Computer loaded with various software • Manila sheet • Maker pen	Is the student able define computer software?	2
		2. State types of computer software	(i) The teacher and student to discuss types of computer software. (ii) Students to list types of computer software.	• Computer loaded with various software • Manila sheet • Marker pen	Can the student state the types of computer software?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Differentiate systems software from application software.	(i) The teacher to lead students to discuss the difference between system software and application software. (ii) Students to list differences between system software and application software.	Manila sheet Marker pen Computer loaded with various software	Is the student able to differentiate system software and hardware?	
		4. Relate software and hardware.	(i) Students to brainstorm on the role of software and hardware for the computer to function properly. (ii) The teacher to summarize and clarify. (iii) Students to use the summary to establish relationship between software and hardware.	• Computer loaded with various software	Is the student able to associate the term software and hardware?	
	3.2 Operating System	The student should be able to: 1. Define the operating system	(i) The teacher to lead students to discuss the meaning of operating system. (ii) Students to develop definition of operating system.	• Computer loaded with various software • Manila sheet • Marker pen	Can the student explain the meaning of operating system?	3
		2. List various types of operating systems.	(i) The teacher to lead students to discuss types of operating systems. (ii) Students to list various types of operating systems.	• Manila sheet • Marker pen • Computer loaded with various software	Can the student list various types of operating systems?	
		3. State functions of operating system.	(i) The teacher to lead students to discuss the function of operating system. (ii) Students to state functions of Operatings system.	• Manila sheet • Marker pen • Computer loaded with various software	Can the student state the functions of operating systems?	

GOVT. SECONDARY

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	3.2.1 Using Operating System	The student should be able to: 1. Applying correct procedure of switching on/off the computer	(i) The teacher to demonstrate how to use windows based operating system (ii) Student to practice to use window based operating system.	• Wall socket • Stabilizer • UPS • Power cable • Computer • Manila sheet • Marker pen	Can the student apply correct procedure of switching on/off the computer?	4
		2. Use operating system to manage files and folders.	(i) The teacher to demonstrate how to create, delete, rename, copy, paste files and folders. (ii) Students to do practice on deleting, renaming, copying and pasting files and folders.	• Manila sheet • Marker pen • Computer loaded with various software	Can the student use operating systems?	
		3. Use the help facility	(i) The teacher to demonstrate how to use help facility. (ii) Students to practice to use of help facility.	• Computer loaded with various software	Can the student use help facility?	
4.0 COMPUTER HANDLING	4.1 Power Management	The student should be able to: 1. Explain the importance of using UPS, Surge Protectors and Voltage Stabilizers	(i) The teacher to lead student to discuss the need of using UPS, surge protector and voltage stabilizers. (ii) The teacher to summarize and conclude the discussion. (iii) Student to use the summary to explain the importance of using UPS, Surge protectors and voltage stabilizers.	• UPS • surge protectors • powers cables • stabilizers • manila sheet • Marker pen	Is the student able to explain the importance of using power regulators?	3

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Explain the effects of voltage fluctuations	(i) The teacher to lead students to discuss the effects of voltage levels, stability, and power interruption on computers. (ii) The teacher to summarize and condude. (iii) Students to use the summary to explain the effects of voltage fluctuations.	• Computer • PC power supply • Wall socket • Power cables • Surge protectors	Is the student able to explain the effects of power fluctuations?	
		3. Check the correct voltage rating before connecting power supply	(i) The teacher and students to discuss the correct voltage rating before connecting power supply. (ii) The teacher to demonstrate how to check correct voltage rating before connecting power supply. (iii) Students to do practice on checking the correct voltage rating before connecting power supply.	• PC Power supply • Computer	Can the student check the correct power rating?	
	4.2 Utility Programs	The student should be able to: 1. Define utility programs	(i) The teacher to lead students to discuss utility programs. (ii) The teacher to summarize and conclude. (iii) Students to use summary to define utility programs.	• Manila sheet • Marker pen • Handouts on utilities	Can the student explain the meaning of utility program?	2
		2. Use utility programs	i) The teacher to demonstrate how to use utility programs. ii) Students to do supervised hand on practice using utility program.	• Computer • Manila Sheet • Mark pen	Can the student use utility program?	
	4.3 Backup data	The student should be able to: 1.Types of back up devices	i) The teacher to demonstrate how to format disk ii) Students to do practice to format disk.	• Computer • Floppy diskette, • Disk	Can the student format disk?	3
		2. Format disk	i) The teacher to demonstrate how to backup data ii) Students to do practice to use ant-virus programs.	• Floppy disk • Computer, Disk, Flash disk	Can the student backup data?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Backup data	i) (i) The teacher and students to discuss types of backup devices. ii) The teacher to summarize and conclude. iii) Students to use summary to list types of backup devices.	• Writoble CD • Storage devices		
	4.4 Computer Security	The student should be able to: 1. Explain the concept of virus	(i) Students to brainstorm the term computer virus . (ii) The teacher to summarize and conclude . (iii) Students to use summary to explain the concept of virus.	• Computer • Software • Manila sheet • Marker pen	Is the student able to explain the reading of computervirus?	3
		2. Use ant – virus pgms	(i) The teacher to demonstrate how to use ant virus programs. (ii) Students to do supervise hands on practice to remove viruses in the computer.	• Computer with Antivirus software • Manila sheet • Mark pen	Can the student use ant virus program to remove virus in the computer?	
		3. Explain the effects of dust, liquid, temperature and humidity on a computer and accessories	(i) Students to brainstorm the effects of dust, liquid, temperature and humidity on a computer. (ii) The teacher and students to discuss the effects of dust liquid temperature and humidity on a computer	• Illustrations • Dust • Water • Oil • Fire	Is the student able to protect the computer from dust, liquid temperature and humidity in a computer	
5 COMPUTER EVOLUTION	5.1 Early Computer Development	The student should be able to: 1. Explain historical background of development of computer.	(i) The teacher and students to discuss contributions from Leibuitz, Pascal, Babbage and others. (ii) The teacher to summarize and conclude. (iii) Students to use summary to explain early computing devices.	• Photographs and pictures of early computing devices • Manila sheet • Marker pen • Handout	Can student explain the meaning of computer software?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Identify early computing devices	i) The teacher to lead students to discuss the early computing devices (Pascal, Abacus, slide rule). ii) The teacher to summarize and conclude. iii)Students to use summary to identify early computing devices.	• Photographs and pictures of early computing devices • Slide rule • Abacus • Manila sheet • Marker pen • Handouts.	(i) Is the student able to identify early computing devices. (ii) Can the student list early computing devices?	
	5.2 Computer Generations	The student should be able to: 1. Identify the stages of Computer generations	(i) The teacher and students to discuss the stages of computer generations. (ii) The teacher to summarize and conclude. (iii) Students to use summary to list stages of computer generations.	• Manila sheet • Marker pen • Photographic and pictures of early computers • Handouts	Is the student able to explain the stages of computer generation?	2
		2. Identify different types of computers.	(i) The teacher and students to discuss the types of computer (Mainframe, miniframe, super computers and microcomputers) (ii) Students to list types of computers.	• Pictures of main frame • Miniframe • Micro computers and supper computers • Manila sheet • Marker pen	Can the student identify different types of computers?	
		3. Differentiate a computer from other electronic devices.	(i) Students to compare and contrast computer and other electronic devices such as calculator, typewriter. (ii) The teacher summarise and conclude. (iii) Students to use summary to differentiate a computer from other electronic devices.	• Computer • Calculator • Electronic typewriter • Telephone • Manila sheet • Marker pen	Is the student able to associate computer and other electronic devices?	

FORM TWO

CLASS COMPETENCES

By the end of Form Two, the student should have ability to:
1. create a word document.
2. use computer spreadsheet to process data.
3. use different types of networks to access information.
4. use Internet to access data and information.

CLASS OBJECTIVES

By the end of Form Two course, the student should be able to:
1. apply word processing skills for data and information processing.
2. analyse data and information using spreadsheet
3. apply knowledge of computer networks to access information.
4. develop skills of using internet and its application

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING /LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
1.0 WORD PROCESS -ING	1.1 Starting and Ending a Word Processing Program	The student should be able to: 1. Explain the meaning of word processing	(i)The teacher to lead discussion on word processing. (ii) Students to develop the definition of word processing.	• Manila sheet • Computer • Hard copy • Marker pens	Can the student explain the meaning of word processing?	7
		2. Explain the importance of word processing	(i)The teacher to organize students in small groups. (ii) Students to discuss and present their work in plenary session.	• Manila sheets • Computer	Is the student able to explain the importance of word processing?	
		3. Start and end a word processing program	(i) The teacher to demonstrate how to start and end a word processing program. (ii) Students to practice on operations of starting and ending a word processing program.	• Computer loaded with appropriate software • User Manual	How correctly can the student start and end a word processing program?	
		4. Create a word processing file	(i)The teacher to demonstrate the use of keyboard in entering text (ii) Students to use keyboard to enter text.	Computer loaded with appropriate software User Manual	Can the student create a word processing file?	
		5. Save a word processing file	(i)The teacher to demonstrate how to save a word processing file. (ii) Students to practice on the operation of saving a file.	• Computer loaded with appropriate software • User Manual	Can the student save a word processing file?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		6 Close a word processing file	(i) The teacher to demonstrate how to close a word processing file. (ii) Students to practice the operation of closing a file.	• Computer loaded with appropriate software • User manual	How correctly can the student close a word processing file?	
		7 Open a word processing file	(i) The teacher to demonstrate how to open a word processing file. (ii) Students to practice the operation of opening a file.	• Computer loaded with appropriate software • User Manual	Is the student able to open a word processing file?	
	1.2 Editing and Formatting	The student should be able to: 1. Edit a word document	(i) The teacher to lead a discussion on what editing a document means (ii) The teacher to summarize the discussion. (iii) The teacher to demonstrate how to edit a document. (iv) Students to edit a document.	• Computer loaded with appropriate software • Soft copy • User Manual	Can the student edit a word processing document?	3
		2. Format a word document	(i) The teacher to lead students to discuss how to format a word document. (ii) The teacher to demonstrate how to format a document (iii) Students to format a word document.	• Computer loaded with appropriate software • User Manual • SoftCopy	Can the student perform formatting operations?	
		3. Check for errors	(i) The teacher to lead students to discuss how to check for errors. (ii) The teacher to demonstrate how to use spell checker and grammar. (iii) Students to use spelling checker and grammar to correct errors.	• Computer loaded with appropriate software • User Manual • Soft Copy	Is the student able to use spellchecker and grammar?	
	1.3 Printing a Document	The student should be able to: 1. perform page set up	(i)The teacher to lead a discussion on the importance of page setup. (ii)The teacher to demonstrate how to perform page setup. (ii) Students to practice page setup operation.	• Computer loaded with appropriate software • User Manual • Softcopy	How correctly can the student setup a page?	3

GOVT. SECONDARY SCHOOL

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Preview a document	(i) Students to brainstorm on preview a document. (ii)The teacher to demonstrate how to practice document preview (ii) Students to perform document preview.	• Computer loaded with appropriate software • User Manual • SoftCopy	Is the student able to preview a document?	
		3. Print a document	(i)The teacher to demonstrate how to print a document. (ii)The students to practice the operation of printing a document.	• Computer loaded with appropriate software • User Manual • Soft Copy	Can the student print a document?	
	1.4 Help facility	The student should be able to: 1. Use help facility	(i)The teacher to prepare exercise on using help facility (ii) Students to do hands on practice to use help facility.	• Computer loaded with appropriate software • User Manual	How correctly can the student use help facility.	2
		2. Use help menu	(i)The teacher to prepare exercise on using help menu. (ii) Students to do hands on practice using help menu.	• Computer loaded with appropriate software • User Manual	Does the student use help menu correctly?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	• T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
2.0 SPREADSHEET	2.1 Concepts and terminologies	The student should be able to: 1. Describe the spreadsheet program	(i)The teacher to organize students into small groups. (ii) Students to discuss the concept of spreadsheet. (iii) Students to present their work in a plenary session. (iv) The teacher to summarize the presentations and conclude.	• Manila Sheet • Marker pen	How best can the student describe the spreadsheet program?	3
		2. Explain spreadsheet terminologies	(i)Students to brainstorm on terminologies such as row, column, cell, cell address and range. (ii) The teacher to summarize and conclude .	• Manila Sheet • Marker pen	How best can the student explain spreadsheet terminologies?	
		3. Outline the uses of a spreadsheet program	(i) Students, in groups, to discuss the various uses of spreadsheet (ii) The teacher to summarize and conclude. (iii) Students to use summary to outline the uses of a spreadsheet program.	• Manila Sheet • Marker pen	Can the student outline uses of a spreadsheet program?	
	2.2 Starting Ending spreadsheet program	The student should be able to: 1. start a spreadsheet program	(i) The teacher to demonstrate how to start a spreadsheet program. (ii) Students to the perform the operation of starting a spreadsheet program.	• Computer loaded with appropriate software • User Manual	How correctly can the student start a spreadsheet program?	4
		2. End a spreadsheet program	(i) The teacher to demonstrate how to end a spreadsheet program. (ii) Students to the perform the operation of ending a spreadsheet program.	• Computer loaded with appropriate software • User Manual	How correctly can the student start a spreadsheet program?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Create a workbook	(i) The teacher to demonstrate how to create a workbook. (ii) Students to practice the operation of creating a workbook.	• Computer loaded with appropriate software • User Manual	Can the student create a workbook?	
		4. Open a worksheet	(i)The teacher to demonstrate how to open a worksheet . (ii) Students to practice the operation of opening a worksheet .	• Computer loaded with appropriate software • User Manual • Softcopy	Can the student open worksheet?	
	2.3 Entering and Editing Data	The students should be able to: 1. Enter data in a worksheet	(i)The teacher to demonstrate how to enter data in a worksheet . (ii) Students to practice the operation of entering in a worksheet.	• Computer loaded with appropriate software • User Manual • Softcopy	How correctly can the student enter data into a worksheet?	3
		2. Edit data in a worksheet	(i)The teacher to demonstrate how to edit data in a worksheet . (ii) Students to the perform the operation of editing data a worksheet.	• Computer loaded with appropriate software • User Manual • Soft copy	Can the student edit data in a worksheet?	
	2.4 Formatting data in a worksheet	The student should be able to: 1. Identify various formatting features	(i)Students to brainstorm on various formatting features. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to practice formatting.	• Computer loaded with appropriate software • User Manual • Softcopy • Manila sheet • Marker pen	How correctly can the student identify the formatting features?	2

TOPIC	SUB-TOPIC	2. SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Use various formatting features	(i) The teacher to provide an exercise on formatting (bold, alignment, underline, shading etc.). (ii) Students to do hands on practice to use various formatting geatures.	• Computer loaded with appropriate software • User Manual • Soft copy	How correctly can the student use formatting features?	
	2.5 Data Manipulation	The student should be able to: 1. Identify mathematical operators	(i)The teacher to lead students in identifying arithmetic operators. (ii) Students to list the operators.	• Computer loaded with appropriate software • User Manual • Softcopy	Is the student able to identify the mathematical operators?	4
		2. Use mathematical operators	(i) The teacher to provide an exercise on using mathematical operators. (ii) Students to do hands on practice using on arithmetic operators.	• Computer loaded with appropriate software • User Manual • Soft copy	Can the student use the mathematical operators?	
		3. Use predefined formula/functions	(i)The teacher to lead students in identifying predefined functions (ii) Students to identify and classify the predefined functions. (iii) The teacher to prepare a hands on exercise. (iv) Students to do hands on practice.	• Computer loaded with appropriate software • User Manual	Can the student use the predefined formula	
	2.6 Charts	The student should be able to: 1. Identify various types of charts	(i)The teacher to lead students in identifying various types of charts. ii) Students to identify and classify the charts.	• Computer loaded with appropriate software • Manila sheet • Marker pen	Is the student able to identify the various types of charts?	3

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Create charts	(i) The teacher to provide a practice on creating charts. (ii) Students to do practice to creating charts.	• Computer loaded with appropriate software • User Manual • Softcopy	How correctly can the student create charts?	
		3. Edit charts	(i) The teacher to provide a hands on exercise editing charts. (ii) Students to do practice on editing charts.	• Computer loaded with appropriate software • User Manual • Softcopy	Can the student edit charts?	
	2.7 Printing a Worksheet	Student should be able to: 1. Perform page setup	(i) Students to brainstorm on the importance of page setup (ii) The teacher to summarize and conclude. (iii) The teacher to demonstrate how to setup worksheet. (iv) Students to practice worksheet setup operation.	• Computer loaded with appropriate software • User Manual • Softcopy	Can the student perform worksheet setup?	4
		2. Preview a worksheet	(i) The teacher to demonstrate on how to preview a worksheet. (ii) Students to practice the operation of previewing a worksheet.	• Computer loaded with appropriate software • User Manual • Softcopy	Can the student preview a worksheet?	
		3. Print a worksheet	(i) The teacher to demonstrate how to print a worksheet. (ii) Student to practice printing of a worksheet.	• Computer loaded with appropriate software • User Manual • Softcopy	Is the student able to print a worksheet?	

TOPIC	SUB TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	2.8 Help Facility	The student should be able to: 4. Use office help facility	The students should be able to: (i) The teacher to provide practice on using help facility (ii) Students to do practice, on help facility.	• Computer loaded with appropriate software • User Manual	How correctly can the student use help facility?	
3.0 COMPUTER NETWORKS AND COMMUNICATIONS	3.1 Introduction to Local Area Network (LAN) and Wide Area Network (WAN)	The student should be able to: 1. Describe a computer network	The students should be able to: (i) Students to discuss, in small groups, the meaning of computer network (ii) Students to present results of their discussion. (iii)The teacher to summarize and conclude. (iv) Students to use summary to describe LAN and WAN.	• Pictures of various networks • Drawings • Manila sheet • Marker pen	How best can the student describe a computer network?	4
		2. Explain Local Area Network (LAN)	The Students should be able to: (i) Students to discuss, in small groups, the concepts of local area and wide area networks. (ii) Students to present their findings (iii) The teacher to summarize and conclude. (iv) The teacher to lead students in identifying the differences between LAN and WAN.	• Pictures of various networks • Drawings • Manila sheet • Marker pen	How correctly can the student explain local Area Network (LAN) and wide Area Network (WAN) ?	
		3. List of accessories used for computer network connection	The Students should be able to: (i) The teacher to lead students in identifying accessories used for network connection. (ii) Students to identify and classify the accessories in terms of their uses.	• Pictures Drawings Network cables, Hubs • Wall ports Modems • RJ45 • RJ11	Can the student list computer network connection accessories?	
		4. Explain the importance of computer networks	The students should be able to: (i) Students to brainstorm on the importance of computer networks. (ii) The teacher to summarize and conclude. (iii) Students to use summary to explain the importance of computer networks.	• Manila sheet • Marker pen	Is the student able to explain the importance of computer network?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	3.2 Network Physical Topologies	The student should be able to: 1. Identify different network topologies	(i) The teacher to lead students in identifying physical network topologies. (ii) The teacher to comment on each of the topologies.	• Pictures of various networks configurations • Drawings	How correctly can the student identify different network topologies?	2
		2. Explain network physical topologies	(i) Students to brainstorm on each of the network physical topologies. (ii) The teacher to summarize and clarify. (iii) Students to use summary to explain network physical topologies.	• Manila sheet • Marker pen	Can the student explain network physical topologies?	
		3. State advantages and disadvantages of each topology	(i) Students to brainstorm on the advantages and disadvantages of the topologies. (ii) The teacher to summarize and conclude. (iii) Students use summary to state advantage and disadvantages of each topology.	• Manila sheet • Marker pen	Is the student able to state the advantages and disadvantages of each physical topology?	
4.0 THE INTERNET	4.1 Concepts	The student should be able to: 1. Describe the internet	(i) Students to brainstorm on the meaning of internet. (ii) The teacher to summarize and conclude. (iii) Students to use summary to describe the internet.	• Computer with internet connection • Manila sheet • Marker pen	How correctly can the student describe the internet?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Explain the historical development	(i) The teacher to provide library search assignments on the historical development of internet . (ii) Students to present their findings. (iii) The teacher to summarize and conclude.	• Computer connected to the internet • Manila sheet • Marker pen	Can the student explain the historical development of computers?	
	4.2 Search Engines	The student should be able to: 1. Describe search engine	(i) Students to brainstorm on the meaning of a search engine. (ii) The teacher to summarize and conclude. (iii) Students to use summary to describe search engine.	• Computer connected to the internet • Manila sheet • Marker pen	Is the student able to describe search engine?	2
		2. List search engines	(i) The teacher to lead students in identifying various search engines. (ii) Students to list various search engines.	• Computer connected to the internet • Manila sheet • Marker pen	Can the student list names of the search engines?	
		3. Use search engines to access information	(i) The teacher to provide a hands on exercise on using search engines. (ii) Students to do hands on practice to use search engines to access information.	• Computer connected to the internet • User guide	Is the student able to use search engines to access information?	
	4.3 Internet application 4.3.1 Electronic Mail	The student should be able to: 1. Explain electronic mail	(i) Students to brainstorm on the meaning of electronic mail. (ii) The teacher to summarize and conclude. (iii) Students to use summary to explain electronic mail.	• Manila sheet • Marker pen	Can the student explain electronic mail?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERODS
		2. Outline the uses of electronic mail	(i) Students to discuss, in small groups, the uses of electronic mail. (ii) The teacher to summarize and conclude the discussion.	• Computer with internet connection • Manila sheet • Marker pen	Is the student able to outline uses of electronic mail?	
		3. Create an electronic mail address	(i) Students to debate on the comparative advantages of electronic mail over other forms of communication. (ii)Students to summarize main points of the debate. (iii) The teacher to conclude the debate by commenting on key issues.	• Computer with internet connection • Manila sheet • Marker pen	Can the student compare electronic mail with other communication media?	3
		4. Use electronic mail	(i) The teacher to demonstrate how to create an electronic mail address. (ii) Students to create electronic mail addresses.	• Computer with internet connection or communication software • User guide	Is the student able to create an electronic mail?	
		5. Compare electronic mail with other communication media	(i) The teacher to demonstrate how to use an electronic mail address. (ii) The teacher to provide a hands on exercise on using electronic mail. (iii) Students to do hands on practice.	• Computer with internet connection or communication software • User guide	Can the student use electronic mail?	
	4.3.2 Electronic Learning	The student should be able to: 1. Explain electronic learning	(i) The teacher to lead the Students to brainstorm on the meaning of electronic learning. (ii) The teacher to summarize and conclude. (iii) Students to use summary to explain electronic learning.	• Manila sheets • Marker pens	Can the student explain electronic learning?	3

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	T/L STRATEGIES	T/L RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. List advantages of electronic learning.	(i) Students to brainstorm on the advantages electronic learning . (ii) The teacher to summarize and conclude. (iii) Students to use summary to list advantages of electronic learning.	• Manila sheets • Marker pens	Is the student able to list advantages of electronic learning?	
	4.3.3 Electronic Commerce	The student should be able to: 1. Explain electronic commerce	(i) Students to discuss, in small groups, the meaning of electronic commerce. (ii) The teacher to summarize the discuss and conclude. (iii) Students to use summary to explain electronic commerce.	• Manila sheets • Marker pens	Can the student explain electronic commerce?	2
		2. Outline applications of electronic commerce	(i) Students to brainstorm on the applications of electronic commerce. (ii) The teacher to summarize and conclude. (iii) Students to use summary to outline applications of electronic commerce.	• Manila sheets • Marker pens	Is the student able to outline applications of electronic commerce?	
	4.4 Negative effects of the internet	The student should be able to outline internet uses that negatively affect our culture	(i) Students to debate on effects of internet on our culture. (ii) Students to summarize the debate. (iii)The teacher to conclude and pinpoint negative effects of internet on our culture.	• Manila sheets • Marker pens	Can the students outline the internet uses that negatively affect our culture?	2

FORM THREE

CLASS COMPETENCES

By the end of Form Three, the student should have ability to:
1. user computers in daily life appropriately.
2. investigate the role of Information Technology in bringing about changes in organization and society.
3. create and use websites to access and process information.
4. create and use databases to organize, store and retrieve information.

CLASS OBJECTIVES

By the end of Form Three course, the student should be able to:
1. analyse the importance of computers in the society.
2. explain the impact of Information and Communication Technology (ICT) on the society.
3. demonstrate skills of developing website.
4. develop skills of using database for organizing information.

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
1.0 IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON THE SOCIETY	1.1 The role of ICT in daily life	The student should be able to: 1. Explain the role of ICT in business, medicine, engineering, data management and entertainment.	(i) The teacher to organize students in groups and provide them with guidelines. (ii) Students to discuss application of ICT in business, medicine, engineering, data management and entertainmet. (iii) Students to present results of their dicussion. (iv) The teacher to summarize students' presentations and conclude. (v) Students to use the summary to explain the role of ICT in Business, medicine, engine data management and entertainment.	• Flipchart, Manila sheets, • Handouts on impact of ICT on the society.	Can the student explain the application of ICT in business, medicine, engineering, data management and entertainment?	5
		2. Explain the roles of ICT in creating awareness on gender , HIV/AIDS, drug and drug abuse globalization, family life, cultural changes, corruption and road safety.	(i) The teacher to organize students in groups to gather information from TV, Radio, CD-ROMs, Internet and Newspaper on Gender, HIV/AIDS, Drug and Drug abuse, Globalization, Family life, Cultural changes, Corruption and Road Safety. (ii) Students to organize and present information gathered. (iii) The teacher to summarize and conclude students' presentations. (iv) Students to use the summary to explain the roles of ICT in creating awareness on gender, HIV/AIDS, drugs and other cross cutting issues.	• TV • Radio, • Computer • Manila sheets • Markerpen, Textbook, • Handout • Video	Can the student explain the roles of ICT in creating awareness on some of the crosscutting issues?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	• TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	1.2 ICT and Crimes	The student should be able to explain criminal activities facilitated by ICT.	(i) The teacher to lead discussion on ICT related crimes such as junkmail, unauthorized electronic money transfer, virus worms and trojan, undesired contents, denial of services and organized crimes. (ii) Students to brainstorm on intervention measures. (iii) The teacher to summarize and conclude the discussion. (iv) Students to use the summary to explain criminal activities facilitated by ICT.	• Marker pen, • Handout on ICT and crimes • Manila Sheet	(i) Can the student explain criminal activities facilitated by ICT? (ii) Is the student aware on ICT crimes? (iii) How best the student explain the intervention measures?	4
	1.3 Information security	The student should be able to: 1. Outline the importance of protecting information systems in various ways.	(i) The teacher to prepare two case studies: one, a house containing valuable items with unlocked doors, two, a mobile phone without Personal Identification Number (PIN). (ii) Students to discuss the two cases. (iii) The teacher to summarize and highlights the importance of: physical security , passwords, encryption and biometrics. (iv) Students to use the summary to outline the importance of protecting information systems in various ways.	• Handout on information security • Computer, • Manila Sheet, • Marker pen	(i) Is the student able to list information protection mechanisms? (ii) Can the student explain the importance of such protection mechanisms?	5

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURSES	ASSESSMENT	NUMBER OF PERIODS
		2. Create a password.	(i) The teacher to demonstrate how to create a password on a mobile phone. (ii) Students to create password on a mobile phone. (iii) The teacher to demonstrate how to create a password on a computer. (iv) Students to create password on a computer.	• Handout on method of creating a password • Computer, • Cellphone	Is the student able to create a password?	
	1.4 ICT and employment	The student should be able to debate on the effects of ICT on employment	(i) The teacher to organize a debate on whether ICT creates employment or unemployment. (ii) The teacher to moderate the debate. (iii) Students to summarize major issues of the debate. (iv) The teacher to clarify and conclude. (v) Students to use the summary to understand the effects of ICT on employment.	• Handout on ICT • Marker pen • Manila sheets	Can the student describe the effects of ICT on employment?	3

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	1.5 ICT and Cultural Interaction	The student should be able to explain the influence of ICT on cultural change	(i) The teacher to organize students in groups to investigate influence of TV, Internet, Video, Radio and Tabloids on dressing, language, music and food. (iii) The students to discuss and present their findings. (iii) The teacher to summarize and conclude the presentations. (iv) Students to use the summary to explain the influence of ICT on cultural change.	• TV • Computer • Video Cassette • Recorder, • Radio, • Manila sheet • Marker pen • DVD player • Tabloid	Is the student able to analyse the influence of ICT on cultural change?	4

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING MARERIALS	ASSESSMENT	NUMBER OF PERIODS
	1.6 ICT Hazards	The student should be able to: Explain the effects of disposing electronic equipments to the environment	(i) The teacher to lead students to investigate the effects of the industrial solid waste products on cleanliness vegetation and pollution. (ii) Students to present their findings. (iii) Students to brainstorm on the effects of disposing electronic equipment to the environment. (iv) The teacher to summarize and conclude the brainstorming session. (v) Students to use summary to explain the effects of disposing electronic equipments to the environment.	• Handout on ICT hazards • Marker pen • Manila sheets	Can the student explain the effects of disposing electronic equipment to the environmet?	4
		2. Outline the health hazards of ICT use to human life.	(i) The teacher to organize the students in groups to discuss the health hazards of watching a TV, using a mobile phone and working with a computer. (ii) Students to present the results of their discussion. (iii) The teacher to summarize the discussion and conclude. (iv) Students to use the summary to outline health hazards of ICT use to human life.	• TV, • Computer, • Cell phone, • Marker pen, • Handout on ICT hazards to human life • Manila sheets	How correctly can the student describe the health hazards of ICT use?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	• TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
2.0 WEB DEVELOPMENT	2.1 Introduction to webpage design	The student should be able to: 1. Explain concepts of a webpage.	(i) Students to brainstorm about a webpage and its structure. (ii) The teacher to summarize and conclude the brainstorming session. (iii) Students to use summary to explain concepts of a webpage.	• Handout on web development • Marker pen, • manila sheet	Is the student able to explain the meaning, ,terminologies and structure of a webpage?	7
		2. Prepare a webpage structure	(i) The teacher to lead the students todiscuss how to design the webpage structure. (ii) The teacher to demostrate how to prepare a webpage structure. (iii) Students to design simple webpage structure.	• Paper , • Manila sheet • Marker pen, • Eraser	Can the student prepare a webpage structure?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURSES	ASSESSMENT	NUMBER OF PERIODS
		3 Create a webpage	(i) The teacher to lead students to discuss how to create a webpage. (ii) The teacher to demonstrate how to create a webpage. (iii) The students to create a webpage individually.	• Computer loaded with appropriate software, • Liquid Crystal Display (LCD) Overhead Projector (OHP).	To what extent can a student create a webpage?	
		4. Explain webpage preview.	(i) The teacher to lead student to discuss how to preview the webpage. (ii) The teacher to summarize and conclude. (iii) The student to preview the webpage.	• Computer loaded with appropriate software, • LCD/OHP projector, • White board	Is the student able to explain webpage preview?	
	2.2 Publishing web pages	The student should be able to: 1. Explain the concepts of publishing a webpage	(i) Students to brainstorm on concepts of publishing a webpage. (ii) The teacher to summarize and conclude. (iii) Students to use summary to explain the concepts of publishing a webpage.	• Manila sheets • Markerpen, • handout, .	Can the students explain the concepts of publishing a webpage?	6
		2. Outline the importance of publishing a webpage	(i) The teacher to lead the students to discuss the importance of publishing a webpage. (ii) The teacher to summarize and conclude the discussion. (iii) Students to use summary to outline the importance of publishing a webpage.	• Markerpen, • Handout, • Textbook • Manila	Is the student able to outline the importance of publishing a webpage?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING MARERIALS	ASSESSMENT	NUMBER OF PERIODS
		3. Explain the procedure of transferring Webpages to the webserver	(i) The teacher to lead students to discuss procedures of transferring webpages to the webserver. (ii) The teacher to demonstrate the procedure of transferring webpages to the webserver. (iii) The students to do hands on exercise on transferring webpages to the seb server.	• Manila sheets •Marker pen •Handout •Computer •Webserver	Is the student able to explain the procedure of transferring webpages to the webserver?	
		4. Distinguish between webpage and websites	(i) The teacher to organize students in groups to discuss the difference between webpage and websites. (ii) Each group to present the discussion outcomes to the classroom. (iii) The teacher to summarize and conclude the presentation outcomes. (iv) Students to use summary to distinguish between webpage and website.	• Marker pen • Manila sheets	Can the student distinguish between webpage and websites?	2
		5. Access information on a website	(i) The teacher to prepare an exercise on accessing specific information. (ii) The students to do hands on practice on accessing specific information on the website .	• Manila sheet • Marker pen • Computer	Can the student access information on a website?	1

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURSES	ASSESSMENT	NUMBER OF PERIODS
3.0 DATABASE AS INFORMATION SYSTEMS	3.1 Manual data Processing System	The student should be able to describe Manual data processing system	(i) The teacher to setup an office model. (ii) Students to perform a role play of a normal office operation. (iii) The teacher to lead students to discuss manual data processing system. (iv) The teacher to summarize and conclude the discussion. (v) Students to use summary to describe manual data processing system.	• Trays • Manila sheet • Tables • Chairs documents file cabinet • Marker pen	How well can the student describe manual data processing system?	2
	3.2 Electronic Data Processing Systems	The student should be able to 1. Describe electronic data processing system	(i) The teacher to lead a brainstorming session on electronic data processing. (ii) The teacher to summarise and conclude the brainstorming session. (iii) Students to use summary to describe electronic data processing systems.	• Manila sheet • Marker pen	Is the student able to describe electronic data processing systems?	2
		2. Compare manual and electronic data processing systems.	(i) The teacher to organize students to debate about electronic and manual data processing systems with focus on storage capacity, speed and accuracy. (ii) Students to summarize major issues of the debate. (iii) The teacher to clarify and conclude the debate. (iv) Students to use summary to compare manual and electronic data processing systems.	• Manila sheet • Marker pen	Can the student compare manual and electronic data processing?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURSES	ASSESSMENT	NUMBER OF PERIODS
		3. Explain the importance of data processing	(i) The teacher to organize the students in groups and prepare scenarios on student taking notes, subject scores processing and doctor taking partient particulars. (ii) The teacher to lead discussion on the significance of each scenario. (iii) The student to present group discussion outcomes (iv) The teacher to summarize and draw conclusion on the importance of data processing. (v) Students to use summary to explain the importance of data processing.	• Mark pen • Handouts	To what extent can student able to explain the importance of data processing?	2
	3.3 Database concepts and terminologies	The student should be able to explain database terminologies	(i) Students to brainstorm on database terminologies such as field, record, form, table and report. (ii) The teacher to clarify and summarize. (iii) Students to use summary to explain database terminologies.	• Computer loaded with appropriate software, • Handout of database terminologies	Is the student able to explain database terminologies?	2

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LERNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	3.4 Types of database systems	The student should be able to 1. Explain the importance of database systems.	(i) The teacher to prepare two scenarios the first scenario students whose particulars are stored properly in school and the second students whose particulars are not known to the school. (ii) Students to discuss advantages and disadvantages of the two scenarios. (iii) The teacher to summarize the discussion and conclude focusing on data integrity, sharing, security, redudance and productivity. (iv) Students to use summary to explain the importance of data systems.	• Manila sheet • Marker pen	To what extent can the student explain the importance of database system?	2
		The student should be able to 2. List types of database systems.	(i) The teacher to lead students in identifying different types of databases. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to list types of database systems.	• Manila Sheet • Marker pen	Can the student list the types of database systems?	1

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVE	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURSES	ASSESSMENT	NUMBER OF PERIODS
	3.5 Creating database	The student should be able to 1. Plan for a database	(i) The teacher to lead students to discuss how to plan for a database. (ii) The teacher to demonstrate on how to plan a database. (iii) Students to plan a simple database.	• Manila sheet • Marker pen • Eraser, • Exercise books	Can the student able to plan a database?	7
		2. Prepare a table for data entry	(i) The teacher to demonstrate how to create a table for data entry. (ii) Students to create a table for data entry.	• Computer loaded with appropriate software	Is the student able to prepare a table for data entry?	
		3. Prepare a data entry form	(i) The teacher to demonstrate how to create a data entry form. (ii) Students to create a form for data entry.	• Computer loaded with appropriate software	Is the student able to prepare a data entry form?	
		4. Enter data using forms and tables	(i) The teacher to prepare a set of data e.g student particulars, livestocks, Agriculture records. (ii) Students to prepare forms and table for data entry. (ii) Students to enter data using forms and tables.	• Computer loaded with appropriate software	Can the student enter data using forms and tables?	
		5. use the help facility database	(i) The teacher to give assignment to the students to prepare notes on the database system e.g. toolbar, logical operators using help facility. (ii) Students to do the given exercise.	• Computer loaded with appropriate software	Can the student use the help facility?	

FORM FOUR

CLASS COMPETENCES

By the end of Form Four, the student should have ability to:
1. manage database systems.
2. create and make presentations.
3. produce desktop publications.
4. create Multimedia Publications.

CLASS OBJECTIVES

By the end of Form Four course, the student should be able to:
1. develop skills of managing database.
2. use presentation application packages.
3. apply skills of presentation.
4. develop skills for desktop publishing.
5. demonstrate appropriate use of multimedia technology

COURSE CONTENT FOR FORM IV

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
1.0 MANAGEMENT OF DATABASE INFORMATION SYSTEMS	1.1 Updating database	The student should be able to: 1. Search a record in an existing database	(i) The teacher to prepare a database of not more than 20 records (ii) The teacher to use database to explain the concept of searching for a record. (iii) The teacher to demonstrate how to search a record. (iv) students to practice on how to search for a record in an existing database.	• Computer loaded with appropriate software • Maker pen • Manila sheet • Database file	Can the student search a record in an existing database?	3
		2. Modify a database file	(i) The teacher to demonstrate on how to delete, add and edit field/record. (ii) Student to practice how to delete, add and edit a field or record. (iii) Students to modify a database file.	• Computer loaded with appropriate software • Maker pen • Manila sheet • Database file	Is the student able to modify a database file?	
	1.2 Queering database	The student should be able to Query database using logical operators.	(i) The teacher to prepare a database of more than 100 records (ii) The teacher to use this database to describe the concept of quering a database (iii) The teacher to demonstrate how to query a database using logical operators. (iv) Students to do hands on exercises on query database using logical operators.	• Computer leaded with appropriate software • Maker pen • Manila sheet • Database file • Guiding manuals	Can the student query database using logical operators?	3

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	1.3 Generating Reports	The student should be able to: 1. Create report layout by using design view mode	(i) The teacher to guide students to collect various samples of useless reports formats (ii) The teacher to demonstrate how to create a report layout by using design view mode (ii) Students to create a report by using design view mode	• Computer loaded with appropriate software • Maker pen • Manila Sheet • Samples of Reports • Database file	How best can the student create a report?	5
		2. Perform page setup	(i) The teacher to lead students to demonstrate how to perform page setup. (ii) Students to perform page setup	• Computer loaded with appropriate soft ware • Maker pen • Manila sheet • Database file	Can the student perform page setup?	
		3. Preview a report	(i) The teacher to demonstrate how to preview a report. (ii) Students in groups to preview a report.	• Computer loaded with appropriate software • Manila sheet • Maker pen • Database file	Is the student able to preview a report?	

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TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		4. Print a report	(i) The teacher to guide students to demonstrate how to print a report. (ii) Students to print a report.	• Computer, loaded with appropriate software • Makerpen • Manila sheet • Database file	Can the student print a report?	
2.0 PRESENTATION	2.1 Art and Skills of presentation	The student should be able to: 1. Explain the concept of presentation	(i) The teacher to organize and guide student in groups. (ii) The teacher to guide students to investigate on cross-cutting issues such as gender, HIV/AIDS Road Safety Drug and drug abuse. (iii) Each group to present their findings. (iv) The teacher to summarize and conclude. (v) Student to use the summary to explain the concept of presentation.	• Manila sheets • White board • Maker pen • Hardouts on art and skills of presentation.	Is the student able to explain a concept of presentation?	12
		2. Mention presentation delivery mode	(i) The teacher to lead question and answer session to identify the presentation delivery models. (ii) The teacher to summarize and conclude the session. (iii) Students to use summary to mention presentation delivery mode.	• TV • Radio • Maker pen • OHP – Overhead Projector • LCD projector – Liquid Cristal Display	Is the student able to identify presentation delivery mode?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Outline general arts and skills of presentation	(i) The teacher to organize and guide students into groups. (ii) The teacher to guide students investigate the cross-cutting issues such as employment, globalization, family life education and prepare a presentation. (iii) Students to discuss the assigned topics. (iv) Each group to present their findings. (v) The teacher to lead students to discuss the presentation based on structure, styles, strategies and supplementary questions. (vi) The teacher to summarize and conclude the discussion. (v) Students to use summary to outline general arts and skills of presentation.	• Flip chart, • Manila sheet • White board • Maker pen	To what extent can the student outline arts and skills of presentation?	
		4. Prepare a presentation	(i) The teacher to lead students to discuss the significance of presentation components such as aim, audience, contents, organizing content and tone in presentation. (ii) Students to prepare a presentation.	• White board • Maker pen • Manila Sheet	How best the student can prepare a presentation?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	2.2. Non – electronic presentation	1. Demonstrate non-electronic presentation	(i) The teacher to lead Students to prepare presentation on the selected topics. (ii) Students to make presentation on assigned topics. (iii) Teacher to comment on presentations focusing on aim, content organization, structure, style and strategies. (iv) Students to use the summary to demonstrate non-electronic presentation.	• Maker pen • Manila sheet	Is the student able to prepare and present a paper based presentation?	2
	2.3 Electronic presentation	The student should be able to: 1. Outline the art and skills of electronic presentation	(i) The teacher to organize and guide students in groups. (ii) The teacher to assign tasks on structure, style and strategies. (iii) Students to present their findings on structure, style and strategies. (iv) The teacher to lead students to discuss the presentations. (v) The teacher to clarify and conclude. (vi) Students to use the summary to outline the art and skills of electronic presentation.	• Maker pen • Computer loaded with appropriate software • LCD Projector • OHP	To what extent can the student prepare an electronic presentation?	14
		2. Open a presentation program	(i) The teacher to lead students to demonstrate how to open a presentation program. (ii) Students to open a presentation program.	• Computer loaded with appropriate software	Is the student able to open a presentation program?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		3. Prepare slides for presentation.	(i) The teacher to lead students to discuss how to prepare slides for presentation. (ii) The teacher to demonstrate how to prepare slides for presentation. (iii) Students to prepare slides for presentation.	• Computer loaded with appropriate software • Samples of slides	How best can the student prepare slides for presentation?	
		4. Perform operations for inserting and deleting slides	(i) The teacher to demonstrate how to insert new and delete slides. (ii) Students to perform operations for inserting and deleting slide.	• Computer loaded with appropriate software. • Presentation file	(i) Can the student delete slide? (ii) Can student insert new slide?	
		5. Prepare guiding notes for presentation.	(i) The teacher to demonstrate how to prepare presentation notes. (ii) Students to prepare presentation notes.	• Computer loaded with appropriate software. • Presentation file	Is the student able to prepare presentation notes?	
		6. Link a presentation file with other documents.	(i) The teacher to lead the students to discuss on how to link a presentation file with other documents. (ii) Student to use link presentation file with other documents.	• Computer loaded with appropriate software. • Presentation file	Is the student able to link presentation file?	
		7. Save the presentation	(i) The teacher to demonstrate how to save the presentation . (ii) Students to save the presentation.	• Computer loaded with appropriate software. • Flash disk • Floppy disk • Presentation file	Can the student save the presentation?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		8. Exit the presentation	(i) The teacher to discuss with students how to exit the presentation program. (ii) The teacher to demonstrate how to exit the presentation. (iii) Students to exit the presentation.	• Computer loaded with appropriate software	Can the student exit presentation ?	
	2.4 Making a presentation	The student should be able 1. Connect Liquid Cristal Display (LCD) to the computer	(i) The teacher to lead students to discuss on how to connect. (ii) The teacher to demonstrate how to connect LCD to the computer room. (iii) Students to connect LCD to the computer.	• Computer loaded with appropriate software • LCD projector • Electric power connector • Remote	Is the student able to connect LCD to the computer?	2
		2. Set up slide show	(i) The teacher to demonstrate how to set up slide show. (ii) Students to set up slide show.	• Computer loaded with appropriate software • Presentation file. • Beam projector	Can the student setup the slides show?	
		3. Use slide show mode	(i) The teacher to lead students to discuss the use of slide show mode. (ii) The teacher to demonstrate how to use slide show mode. (iii) Students to use slide show mode.	• Computer loaded with appropriate software • Presentation file • Beam projectors	Can the student use the slide show mode?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	2.5 Printing the presentation document	The student should be able to: 1. Perform page set up	(i) The teacher to lead student to discuss page setup. (ii) The teacher to demonstrate how to setup page. (iii) Students to perform page set up.	• Computer loaded with appropriate software. • Printer • A4-papers • Paper tray • Clip pins • Office pins • Staple machine • Paper punching machine • Staple pins	Is the student able to perform page set up?	3
		2. Preview a presentation	(i) The teacher to demonstrate how to preview a presentation. (ii) Students to preview a presentation.	• Computer loaded with appropriate software. • Presentation file	Is the student able to preview a presentation document?	
		3. Print the slides /handout	(i) The teacher to demonstrate how to print the slide/handouts. (ii) Student to print the slides handout.	• Computer loaded with appropriate software • Presentation file • Printer • A4 papers • Stapple machine • Clip pins • Office pins	Can the student print the slides or handout?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
3.0 DESKTOP PUBLISHING	3.1 Familiarization with the desktop publishing	The student should be able to: 1. Explain the concept of desk top publishing.	(i) The teacher to assign students to collect printed information from different sources such as banners, newspapers, newsletters, cards, journals and magazines. (ii) The teacher to lead students to identify various features of collected publication materials. (iii) The teacher to organize and guide students in groups . (iv) Students to discuss the concept of desktop publishing. (v) Student to present their findings. (vi) The teacher to summarize and highlight the significance of desktop publishing in creating the identified features. (v) Students to use summary to explain the concept of desktop publishing.	• Banners • Newspaper • Newsletters • Cards • Journals • Magazine	Is the student able to explain the concept of desk top publishing program?	7
		2. Examine various features of the desktop publishing program	(i) The teacher to lead students in identifying the features of desk top publishing. (ii) Students to identify the features of the desktop publishing program.	• Computer load with appropriate software • Journals • Magazine • Newsletters • Ms-Office • Page makers • Havard graphic	Is the student able to examine features of the desktop publishing program?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	3.2 Creating and producing a publication	The student should be able to: 1. Plan for a publication	(i) The teacher to prepare the case study, e.g dairy farming, crop rotation, soil erosion, on which students will plan how to disseminate information to the general public. (ii) Students to plan for a publication. (iii) The teacher to assess the plan, emphasizing on aim content organization, audience and structure of the f publications.	• Computer • Daily farming Journals • Printer • Scanner • Digital Camera • A4 - papers	Is the student able to plan a publication?	9
		2. Design layout of the publication	(i) The teacher to demonstrate how to design a layout. (ii) Students to design a layout based on dairy farming, crop rotation and soil erosion .	• Compute • Daily farming Journals • Printer • Scanner • Digital Scanner	Can the student design a publication?	
		3. Add text or graphics to the layout of the publication.	(i) The teacher to demonstrate how to add text and graphics to the layout of the publication. (ii) Students to add text and graphics to the layout of the publication based on the case study.	• Computer • Scanner • Clip Arts templates • Daily f arming Journals	• Can the student add text on the publication? • Is the student able to add graphics to the publication?	
		4. Perform formatting of text and graphics	(i) The teacher to demonstrate how to perform formatting of text and graphics. (ii) Students to format text and graphics based on the case study given.	• Computer • Font chips • Floppy Disks • Flash Disks	Can the student format text or graphics?	

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TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		5. Describe the procedure for producing publications	(i) The teacher to lead students to discuss on proceedings for producing publications. (ii) Student to use the summary to describe the procedures for producing publications.	• Computer • Printer • Textured A4 papers • Scissors • Ribbons • Paper punching machine • Envelopes	How best can the student describe the procedure for producing publications?	
4.0 MULTIMEDIA	4.1 Multimedia concepts	The student should be able to explain historical development of Multimedia	(i) The teacher to organize students in groups. (ii) Students in groups to search literature on history of multimedia (From library, internet (iii) Students to present their findings. (iv) The teacher to summarize and conclude.. (v) Students to use summary to explain historical development of multimedia.	• Handouts on multimedia technology • computer • reference books • text books • journals • magazines • manila sheet • markerpen	Is the student able to explain the concept of multimedia?	3
	4.2 Multimedia devices	1. List types of multimedia devices.	(i) The teacher to lead students to discuss multimedia devices. (ii) The teacher to summarize and conclude. (iii) Students to use summary to list types of multimedia devices.	• Microphone • Newspapers • Digital Camera • Video camera, scanner	Is the student able to identify the multimedia devices?	3

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Outline minimum requirements for multimedia	(i) The teacher to lead students discuss on identifying hardware and software regiments for multimedia. (ii) Students to list specifications of hardware and software for multimedia.	• Computer • Handouts • Manila sheet • Marker pen • Speakers • Video play • Mouse • Handouts • Manila sheets • Marke pen	Is the student able to outline minimum requirements for multimedia?	
		3. Name areas where multimedia is used.	(i) Students to brainstorm the area which multimedia used such as in education, entertainment, business, advertising, information distribution. (ii) The teacher to summarize and conclude the brainstorming session. (iii) Students to use the summary to name areas where multimedia is used.	• Handouts • Manila sheets • Marker pen	Can the student name areas where multimedia are used.	
	4.3 Sound and video	1. Describe the concept of Sound and Audio	(i) The teacher to lead students to discuss the concept of sound and Audio. (ii) The teacher to clarify and conclude. (iii) Students to use the summary to describe the concepts of sound and audio.	• Television • Radio • Computer • Manila Sheet • Marker pen	How best can the student describe the concepts of sound and audio?	5

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Explain elements of audio	(i) The teacher to guide Students to listen to radio/television. (ii) Students to discuss the components of sound such as frequency . (iii) The teacher to summarize and conclude. (iv) Students to use summary to explain elements of audio.	• Radio • Television • Computer • Manila sheets • Marker pen	Is the student able to explain elements of sound?	
		3. Describe stage of make sound for multimedia	(i) The teacher to guide Students to brainstorm on stages of making sound for multimedia e.g recording, digitizing, editing, mixing and burning. (ii) The teacher to summarize and conclude. (iii) Students to use summary to describe stage of making sound for multimedia.	• Microphone • Computer • Disk • Manila sheet • Marker pen	How best can the student describe stages of making sound for multimedia?	
	4.4 Video recording/shooting	1. Explain the concept of video recording.	(i) The teacher to guide students to discuss video recording shooting. (ii) Students to use the summary to explain the concept of video recording.	• Television • Video • Deck • Manila sheet • Marker pen • Handouts	Is the student able to explain the concepts of video recording?	6

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
		2. Outline the steps to capture a single frame.	(i) The teacher to guide students to brainstorm on steps to captures single frame. (ii) The teacher to summarize and conclude. (iii) Students use summary to outline the steps to capture a single frame.	• Video cossets • Digital video • Video cable • Monitor screen • Television • Video cassette play	Can the student outline the steps to capture a simple frame?	
		3. Outline the steps to capture a multiple frame	(i) The teacher to lead the Students to brainstorm on steps to capture multiple frame. (ii) The teacher to summarize and conclude. (iii) Students to use summary to outline the steps to capture a multiple frame.	• Video capture card • Audio source • Software • Handout	How best can the student outline the steps to capture a multiple frame.?	
	4.5 Video Editing	1. Explain the concept of video editing	(i) The teacher to lead a discussion on video editing. (ii) The teacher to summarize the discussion and conclude. (iii) Students to use the summary to explain the concept of video editing.	• Video cassette recorder • Software • Video cassette	Is the student able to explain the concept of video editing?	4
		2. Use video editing software	(i) The teacher to lead student to discuss the video editidng software. (ii) The teacher to demonstrate the use of video editing software. (iii) Student to use video editing software.	• Video cassette recorder • Software • Video cassette • Computer	Can the student use video editing software?	

TOPIC	SUB-TOPIC	SPECIFIC OBJECTIVES	TEACHING/LEARNING STRATEGIES	TEACHING/LEARNING RESOURCES	ASSESSMENT	NUMBER OF PERIODS
	4.6 Video compression	1. Describe video compression	(i) The teacher to lead students to brainstorm on how to do video compression . (ii) The teacher to summarize and conclude. (iii) Students to use summary to describe video compression.	• Manila sheet • Marker pen • Handout	How best can the student describe video compression?	2
		2. Explain various ways of carrying out video compression	(i) The teacher to lead discussion on various ways of carrying out video compression. (ii) The teacher to summarize and conclude. (iii) Students to use the summary to explain various ways of carrying out video compression.	• Manila sheet • Marker pen • Handout	Is the student able to explain various ways of carrying out video compression?	
	4.7 Interactive contents	1. Describe interactive contents	(i) Teacher to lead student to discuss interactive contents . (ii) The teacher to summarize and conclude	• Computer • Manila • Marker pen • Handout	Can the student describe interactive contents?	2
		2. Explain ways of carrying out interactive contents	(i) The teacher to lead students to discuss ways of carrying out interactive contents. (ii) The teacher to summarize and conclude (iii) Students to use the summary to explain various ways of carrying out interactive contents	• Computer • Marker pen • Manila • Handout	How best can the student explain ways of carrying out interactive contents?	