

# ICT SYLLABUS

SENIOR HIGH SCHOOL



# SHS ONE - TERM ONE

## SECTION ONE

### BASIC ICT CONCEPTS

**General Objective:** The student will:

1. understand the basic concepts of ICT and information processing
2. appreciate the impact of ICT on everyday life

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<b>UNIT 1</b>  <b>INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)</b>	<p>The student will be able to:</p> <p>1.1.1 explain the concept of ICT and its related terminologies</p> <p>1.1.2 describe the information processing cycle</p>	<p>Definition of ICT, related basic concepts and terminologies e.g.</p> <ul style="list-style-type: none"> <li>• Information and Communications Technology (ICT)</li> <li>• Information and Communication Technologies (ICTs)</li> <li>• Data</li> <li>• Information</li> <li>• e-Learning</li> </ul> <p>Information processing cycle</p> <p>Stage 1 - Receiving data (Input devices)</p> <p>Stage 2 - Processing data (Processing device)</p> <p>Stage 3 - display result ( information) (Output devices)</p> <p>Stage 4 - Storing information (Storage devices)</p> <p>Stage 5 - Distribution of Information (human being, e-mail, fax etc)</p>	<p>Let students brainstorm and come out with the meaning of ICT and its related terminologies.</p> <p>Use a simple diagram to illustrate how data is processed into information stored and distributed using the various devices.</p> <p>- Input devices - keyboard, mouse, microphone, scanner</p> <p>-Processing devices – CPU Such as Celeron, Pentiums AMD, MC68040 etc.</p> <p>-Output devices - printer, monitor, speakers, LCD Projector</p> <p>-Storage devices – hard disk, pen drive, CDs, DVD, tape</p>	<p><b>Exercise</b> Students to explain some of the basic ICT concepts and terminologies and show the differences e.g. ICT and ICTs Data and Information</p> <p><b>Exercise</b> Students to list the devices used in the stages of information processing cycle and describe the process.</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p style="text-align: center;">UNIT 2</p> <p style="text-align: center;">INTRODUCTION TO COMPUTERS</p>	<p>The student will be able to:</p>			
	<p>1.1.3 outline the uses of ICT for educational/social/ economic purposes</p>	<p>Uses of ICT tool</p>	<p>In groups students to discuss and come out with the Educational, Social, and economic purposes of ICT.</p>	
	<p>1.1.4 analyse the impact of ICT on educational, social and economic development</p>	<p>Impact of ICT on educational, social and economic development</p>	<p>In groups students to discuss and come out with the impact of ICT on educational, social and economic development</p>	
	<p>1.1.5 Identify career opportunities in ICT education</p>	<p>Career opportunities</p> <ul style="list-style-type: none"> <li>• Internet Café operator</li> <li>• Programmer</li> <li>• Database administrator</li> <li>• Network administrator</li> </ul>	<p>Discuss the various career opportunities with students or invite resource persons to discuss the various opportunities</p> <p>Discuss the history of the development of computers.</p>	<p><b>Assignment:</b></p> <p>1. 2. Students to select ICT career of their choice and find out the requirements and job description and report in class</p>
	<p>1.2.1 identify types of computers</p>	<p>Types of computers:</p> <ul style="list-style-type: none"> <li>• Digital e.g. PC, Laptop</li> <li>• Analogue e.g. thermometer, speedometer</li> <li>• Hybrid e.g. money counting machine, Automated Teller Machine(ATM)</li> </ul>	<p>Display real objects/pictures of types of computers for students to identify.</p>	
	<p>1.2.2 state the uses of computers</p>	<p>Uses of computers</p> <ul style="list-style-type: none"> <li>• process and store of data and information,</li> <li>• to enhance teaching/learning,</li> <li>• produce documents etc</li> </ul>	<p>In small groups, students discuss and report on the uses of computers.</p>	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
	<p>The student will be able to:</p> <p>1.2.3 boot, reboot and shutdown computer correctly</p> <p>1.2.4 Identify possible threats to computers and users.</p> <p>1.2.5 demonstrate the responsible use of computer</p>	<p>Booting, rebooting and shutting down of computer</p> <p>Threats to computers and users.</p> <ul style="list-style-type: none"> <li>• Computer - e.g. viruses, dust, power fluctuation, rodents,</li> <li>• Users – posture , vision, wrist pain</li> </ul> <p>Responsible use of computers</p> <ul style="list-style-type: none"> <li>• Computer ethics e.g. copyright, privacy concerns</li> </ul>	<p>Discuss and demonstrate how to boot, re-boot and shut down a computer correctly.</p> <p>Stress on the correct procedure e.g. Close running Application and use the start menu button to shut down Explain when reboot is necessary Students to practice booting, rebooting and shutting down of computer.</p> <p>Brainstorm and discuss the possible threats to computer and their users</p> <p><u>Field Trip:</u> Field trip to places to find out and report on :</p> <ol style="list-style-type: none"> <li>a. different types of computers and their uses.</li> <li>b. Threats to computers and their users</li> </ol> <p>Discuss the responsible use of the computers. Students to come out with their own rules and regulation for the responsible use of computer.</p>	<p><b>Assignment :</b> Students to write the procedure for booting, rebooting and shutting down a computer.</p>

## SECTION TWO

### HARDWARE AND SOFTWARE

**General Objective:** The student will:

1. recognise the different types of hardware and software and their uses

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<b>UNIT 1</b>  <b>HARDWARE</b>	The student will be able to:			
	2.1.1 describe the categories of Computer Hardware	Categories of the computer hardware: System Unit, Input/Output and Storage and devices	With the help of a computer identify the categories of the computer hardware.	<b>Exercise :</b> Students to prepare a chart showing the classification of fixed and removable data storage devices
	2.1.2 identify the vital component of the Systems Unit	The vital components of the systems Unit e.g. <ul style="list-style-type: none"> <li>• Front Side : power switch light indicators, floppy and CD ROM drive</li> <li>• Back side: USB ports, serial ports, power socket,</li> <li>• Inside: motherboard, CPU, power supply, memory, hard disk, cards( e.g. sound, network)</li> </ul>	With the help of a computer identify and describe the vital component of the systems unit.	
	2.1.3 describe commonly used Input/Output devices and their functions	Input and Output devices <ul style="list-style-type: none"> <li>• Input devices - Keyboard, Mouse scanner, joystick, trackball, bar code reader</li> <li>• Output devices – Monitors, Printers(LaserJet and DeskJet), speakers, LCD projectors etc.</li> </ul>	Discuss the commonly used input and output devices and their functions.	
	2.1.4 identify the main types of storage devices	Types of storage devices <ul style="list-style-type: none"> <li>• CD, DVD, tape, pen drive, floppy diskette,</li> </ul>	Discuss the types of the main storage devices.	
2.1.5 identify devices which serve as both input and output	Devices which serve as both input and output <ul style="list-style-type: none"> <li>• computer, head set, modem etc</li> </ul>	Students to brainstorm and come out with devices that serve both input and output.	<b>Exercise :</b> Students show the correct procedure for attaching and removing removable data storage device for evaluation	

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p>UNIT 2</p> <p>SOFTWARE</p>	<p>The student will be able to</p> <p>2.2.1 identify types of Software packages</p> <p>2.2.2 distinguish between Open Source and Proprietary software.</p> <p>2.2.3 identify different types, examples and uses of Application software</p> <p>2.2.4 launch some Application software</p>	<p>Types of Operating Systems such as DOS, Windows, (windows 98, 2000, ME, XP) Linux, Unix, Macintosh etc.</p> <p>Differences between Open Source and Proprietary Software</p> <p>Types, examples and uses of Application software e.g.</p> <ul style="list-style-type: none"> <li>• Word-processing: WORD and Star Word, Writer</li> <li>• spreadsheets: EXCEL, Lotus 123, Calc</li> <li>• Databases: Access, Base</li> <li>• Presentation: PowerPoint, Impress</li> <li>• Educational: Microsoft Encarta, Mavis Beacon</li> <li>• Games: solitaire, pinball</li> <li>• Browsers: Opera, Internet explorer, Mozilla Firefox</li> <li>• Authoring: Dreamweaver, FrontPage,</li> <li>• Graphics: Corel Draw,</li> <li>• Desktop Publisher – Page Maker, Publisher</li> </ul> <p>Launching Application software; e.g.</p> <ul style="list-style-type: none"> <li>• Word Processor</li> <li>• Spreadsheet</li> <li>• browser,</li> <li>• Internet Explorer</li> </ul>	<p>Discuss the types of software packages</p> <p>In groups students discuss and distinguish between Open Source and Proprietary Operating Systems</p> <p>Discuss type, examples and uses of Application software.</p> <p>Uses Word Processing - document creation</p> <p>Database - Storing, sorting and retrieving large amount of data</p> <p>Presentation: presenting information in a number of attractive format etc</p> <p>Assist students to practise how to launch Applications</p>	<p><b>Exercise:</b></p> <p>1. State the principles underlying: Open Source and Proprietary Software</p>

## SECTION THREE

### TYPING SPEED DEVELOPMENT

**General Objective:** The student will:

1. improve typing speed

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p>UNIT 1</p> <p>KEYBOARDING AND MOUSE SKILLS REVIEW</p>	<p>The pupil will be able to:</p> <p>3.1.1. type 30 – 35 words per minute</p> <p>3.1.2 use mouse skills in document creation</p> <p>3.1.3 use the numeric keypad</p>	<p>Improving speed in typing using a typing software: e.g.</p> <ul style="list-style-type: none"> <li>• Typing Tutor or Mavis Beacon</li> </ul> <p>Using mouse skills in document creation.</p> <p>Using the numeric keypad</p>	<p>Students use the drills in the typing software to improve upon their speed</p> <p><b>NOTE:</b> Teacher should insist on the use of the nine fingers in typing.</p> <p>Guide students to practise mouse skills e.g. Single clicking, Double clicking, Right click, Drag hold and drop in document creation.</p> <p>Assist students to use the numeric keypad.</p> <p>Let students use the drills in Typing Tutor or Mavis Beacon to do more practise on the numeric keypad</p>	<p><b>Exercise:</b> Students to create and reproduce a given document involving alpha and numeric keypad</p>

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TERM TWO

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**SECTION ONE**

**WORD PROCESSING APPLICATION**

**General Objectives** The student will:

1. acquire basic skills creating document in Word Processing

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p><b>UNIT 1</b></p> <p><b>WORD PROCESSING</b></p>	<p>The student will be able to :</p> <p>1.1.1 identify Word Processing package</p> <p>1.2.1 state the importance and use of Word Processing.</p> <p>1.2.2 Create a document using the Word Processor</p> <p>1.2.3 Save a document using the 'Save As' command</p>	<p>Word Processing Package and their uses e.g.</p> <ul style="list-style-type: none"> <li>• Microsoft Word</li> <li>• Writer</li> <li>• WordPad</li> <li>• Text Editor</li> <li>• Star Word</li> </ul> <p>Importance of Word Processing</p> <p>Creating document using a Word Processor</p> <p>Saving document using the 'Save As' command</p>	<p>Discuss Word Processing Package and their uses. e.g. letters, memos, reports</p> <p>Guide students to discuss and come out with the importance of Word Processing .</p> <p>Student to type a passage using Word Processor</p> <p>Student to save the typed document using the 'Save As' command</p>	<p><b>Exercise:</b> Students to type a letter using, name and save in a folder</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
UNIT 2  EDITING TEXT IN WORD PROCESSING DOCUMENT	The students will be able to;  1.2.1 edit, and save Word document using editing tools	Editing Word document using the following editing Tools; <ul style="list-style-type: none"> <li>• Spell check functions</li> <li>• copy/cut and paste facilities</li> <li>• OVR</li> <li>• undo and redo keys</li> <li>• search and replace)</li> </ul>	Students to type a given document, edit, and save using the given editing and formatting tools.  NOTE: Teacher should stress on saving document when working to avoid losing document when power goes off	<b>Exercise:</b> Students to edit a given Word document and save.
UNIT 3  FORMATTING WORD PROCESSING DOCUMENT	1.3.1 format Word document using formatting tools	Formatting and saving a Word document using the formatting tools: <ul style="list-style-type: none"> <li>• Change font (style, size, colour etc)</li> <li>• Text alignment</li> <li>• Numbers and bulleting</li> <li>• Bold</li> <li>• Underline</li> <li>• Italics</li> <li>• Line spacing</li> <li>• Change case</li> </ul>	Students open an existing document format and save using the given formatting tools.	<b>Exercise:</b> Students to format a given Word document and save.

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<b>UNIT 3 INSERTING TABLES AND SYMBOLS IN WORD PROCESSING DOCUMENT</b>	<p>The students will be able to;</p> <p>1.3.1 insert tables in Word Processing document</p> <p>1.3.2 insert symbols and pictures in Word Processing documents</p>	<p>Inserting tables in Word document</p> <p>Inserting symbols and pictures in Word document</p>	<p>Guide students to practise working with tables in Word document</p> <p>Guide students to insert symbols and pictures</p>	
<b>UNIT 4 PRINTING</b>	<p>1.3.1 print documents using various print options</p>	<p>Printing Word documents with various print options</p>	<p>Guide students to:</p> <ul style="list-style-type: none"> <li>• preview documents</li> <li>• print documents with various options e.g. Page range, No. of copies, Collate</li> </ul> <p>Assist students to develop a simple brochure for the school using all the features they have learned</p>	<p><b>Assignment:</b> Assign students to create document inserting tables, symbols, pictures, save and print</p>





UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p>UNIT 3</p> <p>ACCESSING INFORMATION FROM THE INTERNET</p>	<p>The student will be able to;</p> <p>2.3.1 Use Uniform Resource Locators (URLs) and Search Engines to access Information</p> <p>2.3.2 download information from the internet</p> <p>2.3.3 access copy and paste information from internet to a different Application e.g. Word Processing</p>	<p>Using Uniform Resource Locators (URLs) and Search Engines to access information</p> <p>Downloading information from the internet</p> <p>Accessing, copying and pasting information from internet to a different Application e.g. Word</p>	<p>Guide students to use URLs and Search Engines to access information</p> <p>Assist students to download information from the internet</p> <p>Guide students to access, copy and paste information from the internet to a different Application e.g. Word.</p>	<p><b>Exercise:</b> Student to access information on a given topic using URLs and Search Engines</p> <p><b>Exercise:</b> Student to prepare Word document using the information accessed from the internet</p>

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TERM THREE

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**SECTION ONE**

**SPREADSHEET APPLICATION**

**General Objectives:** The student will:

1. acquire basic skills in using Spreadsheet packages
2. appreciate the importance of spreadsheet in data management

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p>UNIT 1</p> <p>SPREADSHEET</p>	<p>The student will be able to;</p> <p>1.1.1 identify Spreadsheet Packages</p> <p>1.1.2 explain related concepts and terminologies</p> <p>1.1.3 identify features in Spreadsheet window</p> <p>1.1.4 identify types of data and state their uses</p>	<p>Spreadsheet packages e.g. Excel, Quatropro, Lotus 123, Linux</p> <p>Related concepts and terminologies e.g.</p> <ul style="list-style-type: none"> <li>• cell</li> <li>• rows,</li> <li>• columns,</li> <li>• worksheet,</li> <li>• workbook,</li> </ul> <p>Features in the Spreadsheet window tool bars:</p> <ul style="list-style-type: none"> <li>• formatting bar</li> <li>• standard bar</li> <li>• formulae bar</li> <li>• help facilities, etc</li> </ul> <p>Types of data and their uses e.g.</p> <ul style="list-style-type: none"> <li>• number</li> <li>• date</li> <li>• text</li> <li>• currency</li> <li>• fraction</li> </ul>	<p>Discuss Spreadsheet Packages listed in the content..</p> <p>Discuss related concepts and terminologies</p> <p>Guide students to identify features of Spreadsheet window</p> <p>Identity types of data and state their uses</p>	<p><b>Exercise:</b> Students to label the features of a printed workbook</p> <p><u>NB:</u> Teacher to capture a workbook, print and give to students to label.</p>

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
SPREADSHEET (CONT'D)	<p>The student will be able to;</p> <p>1.1.5 launch and exit Spreadsheet Application</p> <p>1.1.6 create and save Workbook</p> <p>1.1.7 construct and insert simple formula</p>	<p>Launching and exit Spreadsheet Application</p> <p>Creating and saving workbook</p> <p>Constructing and inserting simple formula</p>	<p>Demonstrate how to launch and exit Spreadsheet Application.</p> <p>Guide students to launch and exist Spreadsheet Application.</p> <p>Guide student to create and save workbook.</p> <p>Demonstrate and guide students on how to construct and apply a simple formula.</p>	<p>Students to enter a given data and do the following:</p> <ul style="list-style-type: none"> <li>- Find averages</li> <li>- Percentages</li> </ul>
UNIT 2 APPLICATION OF SELECTED FORMULA AND FUNCTIONS	<p>2.2.1 use functions common to arithmetic applications e.g. percentages, averages, count, maximum, minimum for simple calculation</p>	<p>Using functions common to arithmetic applications</p>	<p>Assign students to use functions common to arithmetic applications.</p> <p>NOTE: Teacher should focus on the 4 operational signs – addition, subtraction, multiplication and division.</p>	
UNIT 3 FORMATTING WORKSHEET	<p>1.3.1 format worksheet</p>	<p>Formatting worksheet</p> <ul style="list-style-type: none"> <li>• Change: column width row height</li> <li>• Insert: rows, columns, cells</li> <li>• Delete: rows, columns, cells</li> <li>• Merge cells</li> <li>• Merge and centre</li> <li>• Text wrap</li> <li>• Cell alignment etc.</li> </ul>	<p>Demonstrate how to format a worksheet by changing column, width and row height for students to practice.</p> <p>Assist students to insert and delete rows, columns and cells</p> <p>Assist students to create their own worksheet and format by inserting, deleting and merging.</p> <p>Assist students to merge and centre data in rows and columns.</p>	<p><b>Exercise:</b></p> <p>Students to create their own worksheet and format by inserting, deleting, merging,</p>



## SECTION TWO

### PROJECT WORK

**General Objectives:** The Student will:

1. apply internet and Word Processing skills to produce a document

UNIT	SPECIFIC OBJECTIVES	CONTENT	TEACHING AND LEARNING ACTIVITIES	EVALUATION
<p>UNIT 1</p> <p><b>PROJECT WORK - RESEARCH REPORT</b></p>	<p>The student will be able to:</p> <p>2.1.1 search for information on the internet</p> <p>2.2.2 copy, paste and save information from the web onto a Word Processing document</p> <p>2.2.3 format and edit the information using format and editing tools.</p> <p>2.2.4 share the information by attaching it to e-mail message</p> <p>2.2.5 access attached information and print</p>	<p>Searching information from the internet</p> <p>Copying, pasting and saving information from the web onto Word Processing document</p> <p>Formatting and editing information.</p> <p>Sharing information through e-mail attachment</p> <p>Accessing the printing attachment</p>	<p>Select two topics from each of the Core Subjects for students to search for information.</p> <p>Students to copy relevant information, paste and save in Word Processing document</p> <p>Students to format, edit and save information - e.g. bold main headings, underline sub headings, aligning text etc</p> <p>Students to send the information to friends as an attachment</p> <p>Students to access and print their own documents and those of their friends.</p>	<p>Students to produce two documents for assessment</p> <p>Document 1: Research report.</p> <p>Document 2: Attachment from friends</p>