

## FORMAT OF UNIT PLAN/SCHEME OF WORK

Academic year: 2021-2022

Term: First Term

School: .....

Subject: ICT

Subject leader's name:.....

Class: S2

N° of period per week: 2

DATES	UNIT TITLE	LESSON TITLE	Learning objectives + Key Unit competence	Teaching methods & techniques + Evaluation procedures	Resources & References	OBSERVATIONS
WEEK 1 11-15/10	UNIT 1: DATA PROTECTI ON	<b>Protect the computer (user privileges)</b> <ul style="list-style-type: none"> <li>Setting password and user's privilege (administrator and guest)</li> </ul> <b>Harmful programs</b> <ul style="list-style-type: none"> <li>Define a harmful program, and categories of harmful programs (virus, worms, spyware, Trojans, root kit, malware, etc.)</li> </ul> <b>Source of viruses</b> <ul style="list-style-type: none"> <li>Internet</li> <li>Storage devices(media)</li> </ul>	<ul style="list-style-type: none"> <li>Describe computer user privileges.</li> <li>State and identify harmful programs.</li> <li>Identify the source of computer viruses.</li> <li>Identify the role of antivirus and anti-spyware.</li> <li>Create and use computer user accounts.</li> <li>Distinguish different harmful programs.</li> <li>Scan external storage devices before connecting them to the</li> </ul>	<ul style="list-style-type: none"> <li>Learners create administrator and guest accounts on the computer and set a password.</li> <li>In groups, learners discuss the role of different accounts and password for private and school computers.</li> <li>Learners research the types and source of viruses, their prevention and</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computers ,</li> <li>➤ projector,</li> <li>➤ external storages,</li> <li>➤ storage devices,</li> <li>➤ the internet,</li> <li>➤ and ICT student book</li> </ul>	
Week 2 18-22/10		<b>Measures to prevent harmful programs</b> <ul style="list-style-type: none"> <li>Install antivirus programs</li> </ul>				

		<ul style="list-style-type: none"> <li>▪ Avoiding connecting the computer to non-scanned storage device, and avoiding connecting via the browser to non-secure web sites</li> <li>▪ Apply common preventive, procedures(antivirus scan, cleaning agents, spyware and antispyware, backup and restore, and compressing files)</li> <li>▪ Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Use the appropriate computer user privileges to prevent the spread of computer viruses.</li> </ul>	<p>make a presentation.</p> <ul style="list-style-type: none"> <li>• Learners update antivirus and use it to scan the computer and storages.</li> </ul>		
<b>Key Unit Competency:</b> Use computers safely and securely to ensure that data is protected.						
<b>Week 3</b> <b>25-29/10</b>	<b>UNIT 2:</b> <b>ICT IN</b> <b>FINANCIAL</b> <b>TRANSACTION</b>	<p><b>The role of computer in financial transaction</b></p> <ul style="list-style-type: none"> <li>▪ Automated operations, record keeping, and the stock exchange</li> </ul> <p><b>Impact of financial technologies in society</b></p> <p><b>Positive</b></p> <ul style="list-style-type: none"> <li>▪ Quick service delivery</li> <li>▪ Security in transactions</li> <li>▪ Unlimited access to the user's bank account</li> <li>▪ Automated billing</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the importance of using computers in financial transactions.</li> <li>• Know about the different technologies in financial transactions.</li> <li>• State and understand the impact of different technologies in financial</li> </ul>	<ul style="list-style-type: none"> <li>• In small groups the teacher helps learners to determine the role of computer use in society.</li> <li>• Individuals work (research) and present on different technologies and their</li> </ul>	<ul style="list-style-type: none"> <li>➤ <i>Computers,</i></li> <li>➤ <i>projector,</i></li> <li>➤ <i>ICT student book one,</i></li> <li>➤ <i>internet,</i></li> <li>➤ <i>ATM simulator,</i></li> <li>➤ <i>ATM(visit),</i></li> <li>➤ <i>automated billing machine,</i></li> <li>➤ <i>and credit</i></li> </ul>	

Week 4 1-5/11		<ul style="list-style-type: none"> <li>▪ Replacement of people through automation</li> <li>▪ Job opportunities</li> <li>▪ Communication networks</li> <li>▪ Security</li> <li>▪ Reduce payroll expenses</li> <li>▪ Increase revenue to country</li> <li>▪ Solution to bank services problems</li> </ul>	<p>transactions.</p> <ul style="list-style-type: none"> <li>• Explain the importance of computer transactions.</li> <li>• Evaluate the role of different technologies in financial transactions.</li> <li>• Analyze and Criticize the impact of different technologies in financial transactions.</li> </ul>	<p>use in financial transactions</p> <ul style="list-style-type: none"> <li>• In small groups, the teacher helps learners to determine the impact of technologies and their use in financial transactions</li> </ul>	cards and debit cards.	
Week 5 8-12/11		<p><b>Negative</b></p> <ul style="list-style-type: none"> <li>▪ Fraud using computing tools</li> <li>▪ Unemployment for some fields</li> </ul> <p><b>Technology in financial transaction e-commerce</b></p> <ul style="list-style-type: none"> <li>▪ Process of buying and selling on the internet(using credit card in online shops).</li> </ul> <p><b>ATMs</b></p> <ul style="list-style-type: none"> <li>▪ The process of accessing, depositing</li> </ul>	<ul style="list-style-type: none"> <li>• Use ATMs and telephones for financial transactions.</li> </ul>	<ul style="list-style-type: none"> <li>• Learners visit the nearest bank and ATM and the teacher assist the learners to show them the functionalities.</li> <li>• In groups, learners are given</li> </ul>		

		<p>and checking the balance of an account using debit card</p> <p><b>Mobile banking</b></p> <ul style="list-style-type: none"> <li>▪ Process of loading money on a mobile phone account, making life easier, sending and receiving money, and the security of using mobile money.</li> <li>▪ <b>Evaluation</b></li> </ul>		<p>telephones and do exercises in managing money, paying and buying items (airtime, electricity, water, goods, TV subscription, etc.).</p> <p>Learners observe and use billing machines to record items and generate bills for a given request.</p>	
<p><b>Key Unit Competency:</b> Analyze and criticize the role and impact of computing tools in financial transactions. Use computing tools in financial transactions.</p>					

<p><b>Week 6</b> <b>15-19/11</b></p>	<p><b>UNIT3:</b> <b>Object in</b> <b>a document</b></p>	<p><b>Objects: insert and format text boxes</b></p> <ul style="list-style-type: none"> <li>▪ Insert a text box, format a text box, modify colors and lines, and apply fill effects</li> </ul> <p><b>Adding shapes</b></p> <ul style="list-style-type: none"> <li>▪ Insert shapes, format shapes, add text in shapes, and use drawing tools.</li> </ul>			<ul style="list-style-type: none"> <li>➤ Computers</li> <li>➤ projector,</li> <li>➤ text books, and data(images, documents to give samples of data).</li> <li>➤ ICT student book two</li> </ul>	
<p><b>Week 7</b> <b>22-26/11</b></p>		<p><b>Insert pictures and word Art objects</b></p> <ul style="list-style-type: none"> <li>▪ Insert a picture from the clipart gallery and from a file, insert a word Art objects</li> </ul> <p><b>Equations and symbols</b></p> <ul style="list-style-type: none"> <li>▪ Insert symbols and special characters</li> <li>▪ Write equations</li> </ul>			<ul style="list-style-type: none"> <li>➤ Computers</li> <li>➤ projector,</li> <li>➤ text books, and data(images, documents to give samples of data).</li> <li>➤ ICT student book two</li> </ul>	

<b>Week 8</b> <b>29/11-</b> <b>3/12</b>		<b>Evaluation</b> <b>Key unit competency:</b> Insert symbols, pictures , tables and objects into a document	
<b>Week 9</b> <b>6-10/12</b>		<b>EXAMINATION PERIOD</b>	
<b>Week 11</b> <b>20-24/12</b>		<b>MARKING AND REPORT</b>	

## Term 2

<b>DATES</b>	<b>UNIT TITLE</b>	<b>LESSON TITLE</b>	<b>Learning objectives + Key Unit competence</b>	<b>Teaching methods&amp; techniques +Evaluation</b>	<b>Resources &amp; References</b>	<b>OBSERVA TIONS</b>

				procedures		
Week 1 10-14/01	UNIT 4: SPREADSHEET BASICS	<ul style="list-style-type: none"> <li>▪ Definition and role of spreadsheet</li> <li>▪ Create, save and open a workbook</li> </ul> <b>Spreadsheet environment</b> <ul style="list-style-type: none"> <li>▪ Title bar, menus, tool bar, scroll bar, formula bar, status bar, cell, active cell, name box, column and row headings,</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the role of a spread sheet.</li> <li>• Identify the basic features of a spreadsheet.</li> <li>• State how to manipulate cell contents.</li> <li>• Apply various methods to move, delete, and enter data from and into cells.</li> <li>• Manipulate a worksheet and interconnect different worksheets.</li> <li>• Use arithmetic operations to manipulate cell data.</li> </ul>	<ul style="list-style-type: none"> <li>• In groups, learners discuss and explore basic features of a spreadsheet environment.</li> </ul> <b>Through teacher or electronic content guidelines:</b> <ul style="list-style-type: none"> <li>• Learners write sample data in cells and apply indicated manipulation guided by the teacher or electronic content.</li> <li>• Learners to</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computers,</li> <li>➤ projector,</li> <li>➤ ICT student books, and interactive content.</li> </ul>	
Week 2 17-21/01		<b>Cell, row and column basics</b> <ul style="list-style-type: none"> <li>▪ Definition, cell content, enter, select, copy and paste, cut and paste, cell data</li> <li>▪ Change row height, column width, wrap text and merge cells</li> <li>▪ Insert, delete, move, and hide rows and columns</li> </ul> <b>Formatting a cell</b> <ul style="list-style-type: none"> <li>▪ Font</li> <li>▪ Text alignment and orientation</li> <li>▪ Cell borders and fill colors</li> <li>▪ Formatting number and text</li> </ul>				
Week 3 24-28/01		<b>Worksheet basics</b> <ul style="list-style-type: none"> <li>▪ Insert, delete, rename, copy, move, group and ungroup worksheets</li> </ul>				

		<b>Mathematical operators</b> <ul style="list-style-type: none"> <li>Addition, subtraction, multiplication, division and percentages</li> <li><b>Evaluation</b></li> </ul>		<p>link different worksheets by updating data through the grouping of worksheets .</p> <ul style="list-style-type: none"> <li>Learners apply arithmetical operations on numerical data.</li> </ul>		
	<b>Key Unit Competency:</b> Work with a spreadsheet and apply basic manipulation of cell content using arithmetical operations.					
<b>Week 4</b> <b>31/01-</b> <b>4/02</b>	<b>UNIT 5:</b> <b>WORKSHEET</b> <b>DATA</b> <b>PRESANTATI</b> <b>ON</b>	<b>Freeze panes</b> <ul style="list-style-type: none"> <li>Freeze top row</li> <li>Freeze first column</li> </ul> <b>Workbook view</b> <ul style="list-style-type: none"> <li>Normal, page break preview, page layout, custom view, split the worksheet</li> </ul> <b>Sort and filter</b> <ul style="list-style-type: none"> <li>Custom sort, A to Z, Z to A, filter by color text, number,</li> </ul>	<ul style="list-style-type: none"> <li>Identify techniques to freeze columns and rows.</li> <li>Explain the difference between sorting and filtering.</li> </ul> <ul style="list-style-type: none"> <li>Describe the impact</li> </ul>	<ul style="list-style-type: none"> <li>Individually or in small groups the teacher helps learners to work on freezing columns or rows and sorting and filtering</li> </ul>	<ul style="list-style-type: none"> <li>➤ <i>Computers,</i></li> <li>➤ <i>projector,</i></li> <li>➤ <i>ICT student books.</i></li> </ul>	



		<p>and custom filter</p> <ul style="list-style-type: none"> <li>▪ <b>Evaluation</b></li> </ul>	that sorting can have on data.	data.		
<b>Key Unit Competency:</b> Manage a window, sorting and filtering data in a spreadsheet						
<b>Week 5</b> 7-11/02	<b>UNIT 6:</b> <b>ArcGIS</b>	<p><b>Creation of maps</b></p> <ul style="list-style-type: none"> <li>▪ Open a new open map and add data to the map</li> </ul> <p><b>Display of layer (I)</b></p> <ul style="list-style-type: none"> <li>▪ Symbolize layer</li> <li>▪ Add/remove labels of a layer</li> <li>▪ Layer properties, source tab</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to create maps in ArcGIS.</li> <li>• Know how to use navigation tools in ArcGIS</li> <li>• Add data to a map.</li> <li>• Work with data in a map.</li> <li>• Apply simple symbology techniques.</li> <li>• Use an attribute table.</li> <li>• Query a map using measure, go to XY, and hyperlink methods.</li> </ul>	<ul style="list-style-type: none"> <li>• Learners practically recall how to open an existing map, turn on and off layers, and order and rename layers.</li> <li>• Learners perform exercises on how to open a new empty map, add data and save a new map.</li> </ul>	<ul style="list-style-type: none"> <li>➤ <i>Computers,</i></li> <li>➤ <i>projector,</i></li> <li>➤ <i>ArcGIS desktop, and ICT student book two.</i></li> </ul>	
<b>Week 6</b> 14-18/02		<p><b>Attribute table</b></p> <ul style="list-style-type: none"> <li>▪ Open an attribute table, sort descending/ascending, and freeze and unfreeze a column</li> </ul>				
<b>Week 7</b>		<b>Query methods(II)</b>				

21-25/02		<ul style="list-style-type: none"><li>▪ Measure, go to xy, identify, hyperlink, and select features</li><li>▪ Spatial thinking techniques</li><li>▪ <b>Evaluation</b></li></ul>		<ul style="list-style-type: none"><li>• The teacher encourages learners to explore and change symbols by right or left clicking on the symbol.</li><li>• Learners explore the presentation of labels of a layer.</li><li>• Learners open and arrange attribute tables.</li><li>• The teachers help learners to use a query using methods such as measure, go to XY, identify, hyperlink</li></ul>		
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				and select features.		
<b>Key Unit Competency:</b> Fill a new empty map with data, use simple symbols, label features and attributes table, and navigate a map.						
<b>Week 8</b> 28/02-4/03	<b>UNIT 7: COMPLEX FORMULAE AND FUNCTIONS</b>	<b>Predefined operator and symbols in excel formulas</b> <ul style="list-style-type: none"> <li>Complex formula</li> </ul> <b>Cell references</b> <ul style="list-style-type: none"> <li>Relative, absolute, and mixed references</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Identify the order of operations to evaluate a formula involving more than one operator.</li> <li>Identify the importance of referencing a cell.</li> <li>Explain the roles of formula and predefined functions.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher helps learners work with spreadsheets.</li> <li>Using sample data provided by the teacher, learners use complex formulas, cell referencing and functions to manipulate the content of cells.</li> </ul>	<ul style="list-style-type: none"> <li>➤ <i>Computers, projector, excel applications.</i></li> <li>➤ <i>And ICT student book two</i></li> </ul>	
<b>Week9</b> 7-11/03		<b>Cell reference of another worksheet</b> <ul style="list-style-type: none"> <li>Copy paste option and sheet reference</li> </ul> <b>Functions</b> <ul style="list-style-type: none"> <li>Definition of functions</li> <li><b>Evaluation</b></li> </ul>				
<b>Key Unit Competency:</b> Work with spreadsheets to apply complex <i>formula and functions</i> recognizing the order of operations. Apply conditional formatting to the content of a worksheet. Use absolute and relative referencing.						

Week 10 14-18/03		REVISION
Week 11 21-25/03		EXAMINATION PERIOD
Week 12		MARKING AND REPORT

## Term 3

DATE S	UNIT TITLE	LESSON TITLE	Learning objectives + Key Unit competence	Teaching methods & techniques + Evaluation procedures	Resources & References	OBSERVATION S
WEEK 1 18-22/04	UNIT 7: COMPLEX FORMULAE AND FUNCTIONS	<b>Mathematical:</b>  SUM, AVG, ODD, INT, ROUND, EXP, SQRT, POWER, MOD, MAX, MIN, and PRODUCT	<ul style="list-style-type: none"> <li>Use formula involving more than one operator to manipulate the content of cells.</li> <li>Apply cell referencing in</li> </ul>	<ul style="list-style-type: none"> <li>Learners highlight specific content in a sheet based on a condition specified by the teacher.</li> </ul>		
Week 2 25-29/04		<b>Logical:</b>  AND, NOT, OR, and IF  <b>Text:</b>  COUNTA, COUNTBLAN				

		K, UPPER, LOWER, and REPLACE and SEARCH	formulas. ▪ Use functions to manipulate data in worksheets.			
Week 3 2-6/05		<b>Conditional formatting</b> <ul style="list-style-type: none"> <li>▪ Highlight cell rules (greater than, equal to, less than, etc), top bottom rules, data bars, color scales, and icon sets</li> <li>▪ <b>Evaluation</b></li> </ul>				
Week 4 9-13/05	<b>UNIT 8: NETWORK COMPONENTS AND SOCIAL MEDIA APPLICATIONS.</b>	<ul style="list-style-type: none"> <li>▪ Devices that can be connected to a network(desktop, laptop, printers, scanners, PDAs), and smartphones</li> <li>▪ Connect different devices to the computer network</li> <li>▪ Network resources</li> </ul>	<ul style="list-style-type: none"> <li>• Identify devices that can be connected to the network.</li> <li>• Identify network resources.</li> <li>• Identify different network mediums.</li> </ul>	<ul style="list-style-type: none"> <li>• In groups, discuss computer network devices, mediums and peripherals.</li> <li>• The teacher helps learners describe different components of a computer network,</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computers,</li> <li>➤ servers,</li> <li>➤ routers,</li> <li>➤ switches,</li> <li>➤ transmission data cables,</li> <li>➤ projector,</li> <li>➤ and ICT student book two.</li> </ul>	
Week 5 16-		<ul style="list-style-type: none"> <li>▪ Network medium: cables (coaxial cable, fiber</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the network</li> </ul>			

20/05		<p>optic cable, twisted pair cable), and radio wave (Bluetooth, infrared and Wi-Fi)</p> <ul style="list-style-type: none"> <li>Computer network devices (switch, hub, access point, router and multifunction device)</li> <li>Network peripherals (scanner and printer)</li> </ul>	<p>device and the peripherals.</p> <ul style="list-style-type: none"> <li>Know how to use social media appropriately</li> <li>Connect devices to the network.</li> <li>Explain computer network resources.</li> <li>Differentiate between computer network mediums.</li> </ul>	<p>resources and devices.</p> <ul style="list-style-type: none"> <li>The teacher helps students to identify and value the best practice of different types of social media.</li> <li>In small groups, the teacher helps learners to communicate using predefined social media.</li> </ul>		
Week 6 23-27/05		<p><b>Social media</b></p> <ul style="list-style-type: none"> <li>Value of social media, social media best practice, example of social media (Facebook, twitter, google +, linkdln, YouTube, skype, blogging, etc)</li> <li><b>Evaluation</b></li> </ul>	<ul style="list-style-type: none"> <li>Differentiate computer network devices.</li> <li>Share on the computer network different network peripherals.</li> </ul>			

**Key Unit Competency:** Identify computer network devices, medium and peripherals. Connect different computer devices to the network. Use social media to exchange information on social life.

<b>Week 7</b> <b>30/05 -3/06</b>	<b>UNIT 9:</b> <b>GAME PROGRAMMING</b>	<b>Game concepts</b> <ul style="list-style-type: none"> <li>▪ Game name</li> <li>▪ List of sprite (name, costumes, sound, movements)</li> </ul>	<ul style="list-style-type: none"> <li>• Identify different classes needed to make a good game.</li> </ul>	<ul style="list-style-type: none"> <li>• Individual work on producing a game.</li> <li>• The learner can imagine/observe an animated game and produce it.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Scratch editor,</li> <li>➤ internet connection,</li> <li>➤ digital material,</li> <li>➤ projector,</li> <li>➤ ICT student book two,</li> <li>➤ And computer</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>
<b>Week 8</b> <b>6-10/05</b>		<ul style="list-style-type: none"> <li>▪ How sprite interact in this game</li> <li>▪ Provide the list of background</li> <li>▪ The score counter rule and level advancement rule</li> </ul>	<ul style="list-style-type: none"> <li>• Apply detailed classes to develop a game.</li> <li>• Include rules in the game.</li> <li>• Interact with the basic classes to produce a game such as game name, sprites, sprite interaction, backgrounds, and</li> </ul>	<ul style="list-style-type: none"> <li>• Group discussion on how to associate commands and produce a good game.</li> <li>• Practice how to include rules in the game using scratch commands such as touching colour, broadcast, when I receive, go</li> </ul>		
<b>Week 9</b> <b>13-17/06</b>		<b>Correct detailed data in the table</b> <ul style="list-style-type: none"> <li>▪ Provide in a well-drawn table(draft) each item that will guide the game designer in order to</li> </ul>				

		limit any kind of mistake or jumping of steps	scores and levels.	to, change by, show, etc.		
<b>Week 10</b> 20-24/06		<b>Commands to set game rules</b> <ul style="list-style-type: none"> <li>Switch to costume, forever, if, touching color, broadcast, when I receive,</li> <li>Go to, change by, show, repeat, hide, wait, stop all, point in direction</li> </ul>	<ul style="list-style-type: none"> <li>To detail each class by providing an information table to for clarity and greater understanding.</li> </ul>			
<b>Week 11</b> 27/06-1/07		<ul style="list-style-type: none"> <li>Round pick random, if on, edge bounce, turn, if else, etc.</li> <li><b>Evaluation</b></li> </ul>	<ul style="list-style-type: none"> <li>Create scripts based on the sprite interaction rules.</li> </ul>			
<b>Key Unit Competency:</b> To be able to design a game, collect data in a table and add game rules.						
<b>Week 12</b> 4-8/07		<b>EXAMINATION PERIOD</b>				
<b>Week 13</b> 11-15/07		<b>MARKING AND REPORT</b>				



