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# SENIOR SCHOOL CURRICULUM DESIGN

**GRADE 10**

## INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT  
2024

**DRAFT**



**KENYA INSTITUTE OF CURRICULUM DEVELOPMENT**  
*Nurturing Every Learner's Potential*

**SENIOR SCHOOL CURRICULUM DESIGN**

**GRADE 10**

**INFORMATION AND COMMUNICATION TECHNOLOGY  
(ICT)**

**JUNE, 2024**



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## TABLE OF CONTENTS

NATIONAL GOALS OF EDUCATION .....	ii
LEARNING OUTCOMES FOR SENIOR SCHOOL.....	iv
THE SENIOR SCHOOL IN THE COMPETENCY BASED CURRICULUM (CBC).....	v
PROPOSED LIST OF SUBJECTS AT SENIOR SCHOOL.....	vi
LESSON DISTRIBUTION AT SENIOR SCHOOL.....	vii
ESSENCE STATEMENT .....	vii
SUBJECT GENERAL LEARNING OUTCOMES.....	viii
SUMMARY OF STRANDS AND SUB STRANDS .....	ix
STRAND 1.0: ICT AND SOCIETY .....	1
STRAND 2.0 PRODUCTIVITY TOOLS .....	8
STRAND 3.0: INTERNET AND WEB TECHNOLOGIES .....	17
APPENDIX: SUGGESTED ASSESSMENT METHODS, LEARNING RESOURCES AND NON-FORMAL ACTIVITIES...	27



## NATIONAL GOALS OF EDUCATION

Education in Kenya should:

### 1. **Foster nationalism and patriotism and promote national unity.**

Kenya's people belong to different communities, races and religions, but these differences need not divide them. They must be able to live and interact as Kenyans. It is a paramount duty of education to help young people acquire this sense of nationhood by removing conflicts and promoting positive attitudes of mutual respect which enable them to live together in harmony and foster patriotism in order to make a positive contribution to the life of the nation.

### 2. **Promote the social, economic, technological and industrial needs for national development.**

Education should prepare the youth of the country to play an effective and productive role in the life of the nation.

#### a) **Social Needs**

Education in Kenya must prepare children for changes in attitudes and relationships which are necessary for the smooth progress of a rapidly developing modern economy. There is bound to be a silent social revolution following in the wake of rapid modernization. Education should assist our youth to adapt to this change.

#### b) **Economic Needs**

Education in Kenya should produce citizens with the skills, knowledge, expertise and personal qualities that are required to support a growing economy. Kenya is building up a modern and independent economy which is in need of an adequate and relevant domestic workforce.

#### c) **Technological and Industrial Needs**

Education in Kenya should provide learners with the necessary skills and attitudes for industrial development. Kenya recognizes the rapid industrial and technological changes taking place, especially in the developed world. We can only be part of this development if our education system is deliberately focused on the knowledge, skills and attitudes that will prepare our young people for these changing global trends.

### 3. **Promote individual development and self-fulfilment**

Education should provide opportunities for the fullest development of individual talents and personality. It should help children to develop their potential interests and abilities. A vital aspect of individual development is the building of character.



**4. Promote sound moral and religious values.**

Education should provide for the development of knowledge, skills and attitudes that will enhance the acquisition of sound moral values and help children to grow up into self-disciplined, self-reliant and integrated citizens.

**5. Promote social equity and responsibility.**

Education should promote social equality and foster a sense of social responsibility within an education system which provides equal educational opportunities for all. It should give all children varied and challenging opportunities for collective activities and corporate social service irrespective of gender, ability or geographical environment.

**6. Promote respect for and development of Kenya's rich and varied cultures.**

Education should instill in the youth of Kenya an understanding of past and present cultures and their valid place in contemporary society. Children should be able to blend the best of traditional values with the changing requirements that must follow rapid development in order to build a stable and modern society.

**7. Promote international consciousness and foster positive attitudes towards other nations.**

Kenya is part of the international community. It is part of the complicated and interdependent network of peoples and nations. Education should therefore lead the youth of the country to accept membership of this international community with all the obligations and responsibilities, rights and benefits that this membership entails.

**8. Promote positive attitudes towards good health and environmental protection.**

Education should inculcate in young people the value of good health in order for them to avoid indulging in activities that will lead to physical or mental ill health. It should foster positive attitudes towards environmental development and conservation. It should lead the youth of Kenya to appreciate the need for a healthy environment.



## **LEARNING OUTCOMES FOR SENIOR SCHOOL**

By the end of Senior School, the learner should be able to:

1. Communicate effectively and utilise information and communication technology across varied contexts.
2. Apply mathematical, logical and critical thinking skills for problem solving.
3. Apply basic research and scientific skills to manipulate the environment and solve problems.
4. Exploit individual talents for leisure, self-fulfilment, career growth, further education and training.
5. Uphold national, moral and religious values and apply them in day to day life.
6. Apply and promote health care strategies in day to day life.
7. Protect, preserve and improve the environment for sustainability.
8. Demonstrate active local and global citizenship for harmonious co-existence.
9. Demonstrate appreciation of diversity in people and cultures.
10. Manage pertinent and contemporary issues responsibly.



## THE SENIOR SCHOOL IN THE COMPETENCY BASED CURRICULUM (CBC)

**Senior School is the forth level of Basic Education in the Competency Based Curriculum (CBC)** that learners shall come to after the Pre-Primary, Primary and Junior School (JS). The essence of Senior School is to offer learners a Pre- University/ Pre-career experience where the learners have an opportunity to choose pathways where they have demonstrated interest and/or potential at the earlier levels. Senior school comprises three years of education for learners in the age bracket of **15 to 18 years** and lays the foundation for further education and training at the tertiary level and the world of work. In the CBC vision, learners exiting this level are expected to be *engaged, empowered and ethical citizens* ready to participate in the socio-economic development of the nation.

At this level, learners shall take **SEVEN (07) learning areas (LAs)** as recommended by the *Presidential Working Party on Educational Reforms* (PWPER). These shall comprise **Four Compulsory** learning areas, and Three learning areas opted for by the learner according to their chosen Pathway. While English and Kiswahili are indicated as Compulsory, the learners who opt for these learning areas as their subjects of specialization shall go through a *differentiated curriculum* in terms of scope, experiences and assessment. Such learners shall; therefore, take *Advanced English* or *Kiswahili Kipevu* with additional two lessons. It is recommended that AT LEAST TWO learning areas should be from chosen Pathway. In exceptional cases, some learners may opt for ONE learning area from the chosen Pathway and a maximum of TWO learning areas from any of the three pathways; depending on the learner's career projections and with guidance by the principals at Senior School.





## PROPOSED LIST OF SUBJECTS AT SENIOR SCHOOL

Compulsory Subjects	Science, Technology, Engineering & Mathematics (STEM)	Social Sciences	Arts & Sports Science
1. English 2. Kiswahili/KSL 3. Community Service Learning 4. Physical Education  <i><b>NB: ICT skills will be offered to all students to facilitate learning and enjoyment</b></i>	5. Mathematics/Advanced Mathematics 6. Biology 7. Chemistry 8. Physics 9. General Science 10. Agriculture 11. Computer Studies 12. Home Science 13. Drawing and Design 14. Aviation Technology 15. Building and Construction 16. Electrical Technology 17. Metal Technology 18. Power Mechanics 19. Wood Technology 20. Media Technology* 21. Marine and Fisheries Technology*	22. Advanced English 23. Literature in English 24. Indigenous Language 25. Kiswahili Kipevu/Kenya Sign Language 26. Fasihi ya Kiswahili 27. Sign Language 28. Arabic 29. French 30. German 31. Mandarin Chinese 32. History and Citizenship 33. Geography 34. Christian Religious Education/ Islamic Religious Education/Hindu Religious Education 35. Business Studies	36. Sports and Recreation 37. <i>Physical Education (C)</i> 38. Music and Dance 39. Theatre and Film 40. Fine Arts



## **LESSON DISTRIBUTION AT SENIOR SCHOOL**

The number of lessons in each of the compulsory learning areas shall be 4; while the optional areas shall be 6 lessons each. A lesson shall be 40 minutes. The "free" lessons shall be used for development of ICT skills, Pastoral Instruction Programme (PPI), projects, collaborative study and further reading.

## **ESSENCE STATEMENT**

Information Communication Technology (ICT) is concerned with the use of computers and telecommunication systems to acquire, create, store, process and disseminate data and information for the purpose of supporting decision making at individual or organisational level. ICT subject at Senior School builds on the Pre-Technical Studies competencies developed at Junior School where learners acquired basic skills of computer hardware, computer software, safety, communication and visual programming.

The curriculum aims at equipping all learners at senior school with knowledge, skills, attitudes and values for creative and innovative use of ICT. It focuses on developing and imparting ICT skills as well as preparing learners who can safely, securely, socially and ethically use: ICT systems, ICT productivity tools, ICT applications and Internet technologies. These components aim to develop critical thinking, problem-solving, creativity, innovation, communication and digital literacy skills, all considered essential to prepare learners for further studies in higher level of education

This subject is anchored on National Goals of Education No. 2 to provide the learners with the necessary skills and attitudes for industrial development, Kenya Vision 2030 on making education responsive to education needs, Sessional Paper No 1 of 2019, which recommended the promotion of technical and vocational education with an emphasis on Science, Technology, and Innovation (ST&I) in the school curriculum. It is also informed by the National ICT Policy of Kenya 2016 (revised 2020), which emphasises on use of ICT as a foundation for the creation of a more robust economy.



## **SUBJECT GENERAL LEARNING OUTCOMES**

By the end of Senior School, the learner should be able to:

- a) Communicate effectively through the use of information and communication technological innovations.
- b) Demonstrate knowledge of information and communication technology applications that enhances their personal and professional productivity
- c) Recognize potential risks associated with the use of ICT, and means by which they can mitigate the risks in a responsible way.
- d) Make valuable contributions to the social and economic development of the society through the use of information and communication technology skills.
- e) Apply knowledge, skills, attitude and values in information and communication technologies in daily live activities and lifelong learning.
- f) Demonstrate information and communications skills that can impact current and new methods of working in the outside world and on social, economic, ethical and moral issues.



## SUMMARY OF STRANDS AND SUB STRANDS

Strands	Sub Strands	Suggested Number of Lessons
<b>1.0 ICT and Society</b>	1.1 Introduction to ICT	4
	1.2 Application areas of ICT	4
	1.3 Operating systems	6
<b>2.0 Productivity Tools</b>	2.1 Word Processing	10
	2.2 Presentation	6
	2.3 Desktop Publishing	8
<b>3.0 Internet and Web Technologies</b>	3.1 The Internet	6
	3.2 Digital Communication	10
	3.3 Digital Citizenship	6
<b>Total Number of Lessons</b>		<b>60</b>



## STRAND 1.0: ICT AND SOCIETY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
<b>1.0 ICT and Society</b>	<b>1.1 Introduction to ICT (4 lessons)</b>	By the end of the sub strand the learner should be able to: a) identify technologies used in Communication, b) explain the components of ICT infrastructure in an organisation, c) use ICT to interact with information on a topical issue, d) appreciate the importance of ICT in the society.	The learner is guided to: <ul style="list-style-type: none"> <li>• brainstorm on the meaning of the terms; information, process, communication, technology, information technology, Information and Communication technology (ICT),</li> <li>• use print or digital media to search for information on technologies used in Communication,</li> <li>• discuss the components of ICT infrastructure in an organisation,</li> <li>• engage in an activity to send and receive information using an ICT device,</li> <li>• share experiences on importance of ICT in the society.</li> </ul>	How do different digital technologies facilitate communication and information exchange in a society?
<b>Core competencies to be developed</b> <ul style="list-style-type: none"> <li>• Critical Thinking and Problem Solving: learner develops research skills when searching for information on technologies used in Communication</li> <li>• Communication and collaboration: learner acquires speaking, listening and teamwork skills when discussing the components of ICT infrastructure in an organisation</li> </ul>				

**Values:**

- Peace: learner has respect for diversity when discussing the components of ICT infrastructure in an organisation
- Unity: learner accommodates each other's opinion when brainstorming on the meaning of the terms; information, process, communication, technology, information technology, Information and Communication technology (ICT)

**Pertinent and Contemporary Issues (PCIs):**

Socio cohesion: learner develops abilities to relate with others when discussing the components of ICT infrastructure in an organisation.



Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
<b>1.0 ICT and Society</b>	<b>1.2 Application Areas of ICT</b>  <b>(4 lessons)</b>	By the end of the sub strand the learner should be able to: a) identify application areas of ICT in the society, b) relate the application areas of ICT to solving community problems, c) appreciate the role of ICT in the society.	The learner is guided to: <ul style="list-style-type: none"> <li>● use print or digital media to search for information on areas where ICTs are used and share the findings,</li> <li>● visit school community areas such as the school administration office, accounts office, and nearby supermarket to observe how ICT is used,</li> <li>● discuss the use of ICT in solving community problems,</li> <li>● share experiences on the challenges posed by ICT in society.</li> </ul>	<ol style="list-style-type: none"> <li>1. How is ICT used to solve problems in daily life?</li> <li>2. What are the trends in ICT application areas?</li> </ol>
<b>Core competencies to be developed</b> <ul style="list-style-type: none"> <li>● Critical thinking and problem solving: learner acquires Interpretation and inference skills when using print or digital media to search for information on areas where ICTs are used.</li> <li>● Citizenship: learner develops global awareness skills when sharing experiences on the challenges posed by ICT in society.</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>● Social justice: accords equal opportunities in sharing responsibilities as learner role plays use of ICT in daily life activities.</li> <li>● Integrity: learner has online self-discipline when using print or digital media to search for information on areas where ICTs are used.</li> </ul>				

**Pertinent and Contemporary Issues (PCIs):**

Online safety: learner observes online safety measures when using digital media to search for information on areas where ICTs are used and share the findings.





Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
<b>1.0 ICT and Society</b>	<b>1.3 Operating Systems</b>  <b>(6 lessons)</b>	By the end of the sub strand the learner should be able to: a) explain the importance of operating systems in digital devices, b) identify types of operating systems used in digital devices, c) use operating system to organise files and folders in a computing device, d) implement security control measure on files and folders in a computing device using the operating system,	The learner is guided to: <ul style="list-style-type: none"> <li>• brainstorm the meaning and importance of operating systems in a digital device,</li> <li>• identify and discuss types of operating systems in digital devices (windows, Linux, macOS, Android, iOS) including those in dedicated digital devices,</li> <li>• explore the operating system interface used for interaction (GUI, command line, menu driven),</li> <li>• engage in basic operating system manipulations such as changing the desktop background, adjusting system settings, locating applications,</li> <li>• use the file explorer to navigate through a computer system,</li> <li>• manipulate files and folders (creating, renaming, moving, copying, searching and deleting files and folders) within the operating system environment,</li> <li>• apply features of the operating system such as file permissions, user access controls, passwords, file backups and</li> </ul>	What role do operating systems play in supporting user operations in a digital device?



		e) appreciate the use of operating systems in a digital device.	file organization techniques to efficiently secure files and folders in a computing device.	
<b>Core competencies to be developed</b> <ul style="list-style-type: none"> <li>● Learning to learn: learner carries out research when exploring the operating system interface used for interaction.</li> <li>● Digital literacy: learner interacts with digital technology when creating, renaming, moving, copying, searching and deleting files and folders within the operating system environment.</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>● Love: learner respects others when brainstorming the importance of operating systems in a digital device</li> <li>● Responsibility: learner performs assigned roles when engaged in basic operating system manipulations such as changing the desktop background, adjusting system settings, locating applications</li> </ul>				
<b>Pertinent and Contemporary Issues (PCIs):</b> <ul style="list-style-type: none"> <li>● Self-esteem: learner's self-confidence is enhanced when engaged in basic operating system manipulations, creating, renaming, moving, copying, searching and deleting files and folders within the operating system environment.</li> </ul>				



<b>Suggested Assessment Rubric</b>				
<b>Indicators</b>	<b>Exceeds Expectation</b>	<b>Meets Expectation</b>	<b>Approaches Expectation</b>	<b>Below Expectation</b>
Ability to use ICT to interact with information	Proficiently use ICT to interact with information	Uses ICT to interact with information	Uses ICT to interact with information with minimal help	<u>Use</u> ICT to interact with information with a lot of help
Ability to relate the application areas of ICT to solving community problems	Relates the application areas of ICT to solving community problems and gives examples	Relates the application areas of ICT to solving community problems	Relates some application areas of ICT to solving community problems	Relates few application areas of ICT to solving community problems
Ability to use operating system to organise files and folders in a computing device	Demonstrates advanced proficiency in using file management tools and features of the operating system to organize files and folders.	Demonstrates proficient use of file management tools and features of the operating system to organize files and folders	Demonstrates basic proficiency in using some file management tools and features of the operating system to organize files and folders	Demonstrates limited proficiency in using file management tools and features of the operating system to organize files and folders



## STRAND 2.0 PRODUCTIVITY TOOLS

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
<b>2.0 Productivity Tools</b>	<b>2.1 Word Processing</b>  <b>(10 Lessons)</b>	By the end of the sub strand the learner should be able to: a) explain the importance of word processing in document production b) select a word processing productivity tool to be used for document production, c) create a text document using word processing productivity tools, d) share a document created in a word processing productivity tool, e) appreciate the emerging trends in word processing productivity tools.	The learner is guided to: <ul style="list-style-type: none"> <li>● brainstorm on the meaning and importance of word processing in document production,</li> <li>● explore a real-world setting to identify examples of word processing applications. (Apache OpenOffice, LibreOffice, Microsoft Word, Google Docs, WPS Office Write)</li> <li>● perform word processing tasks which include creating, saving, navigating, closing, and retrieving a text document</li> <li>● brainstorm ways of formatting a text document to make it visually appealing and well-presented</li> <li>● carry out page layout tasks such as setting margins, paper size, and page numbering</li> <li>● use editing tools in a word processor on a created document,</li> </ul>	How can the key features in a Word Processor be optimised to enhance document production?



			<p>such as thesaurus, spell checker, grammar checker, auto-complete, and auto-correct.</p> <ul style="list-style-type: none"><li>● apply formatting features in a word processor to characters, paragraphs, columns, and page formats to give the document a professional appearance.</li><li>● insert and format a table of figures and table of content in a created document,</li><li>● insert section and page breaks, styles, headers and footers, hyperlinks, cross referencing</li><li>● create and manipulate tables</li><li>● generate merged documents</li><li>● insert and format graphics (symbols, shapes, images, text wrap).</li><li>● collaborate with peers by using the track changes and comments features</li><li>● share a text document created in a word processor through hard copy, PDF, email, or upload.</li></ul>	
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			<ul style="list-style-type: none"> <li>engage a resource person about emerging trends in word processing productivity tools.</li> </ul>	
<b>Core competencies to be developed</b> <ul style="list-style-type: none"> <li>Communication and Collaboration: learner develops listening and speaking skills when brainstorming on the meaning and importance of word processing in document production.</li> <li>Critical Thinking and problem solving: learner acquires active listening and communication skills when brainstorming on ways of formatting a text document to make it visually appealing and well-presented.</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>Unity: learner respects others opinion when brainstorming on ways of formatting a text document to make it visually appealing and well-presented.</li> <li>Peace: learner is patient with others when brainstorming on the meaning and importance of word processing in document production.</li> </ul>				
<b>Pertinent and Contemporary Issues (PCIs):</b> Self-esteem: learner self-confidence is enhanced when performing tasks which include creating, saving, navigating, closing, and retrieving a word processing document.				



Strand	Sub strand	Suggested learning outcomes	Suggested learning experiences	Suggested Key Inquiry Questions
<b>2.0 Productivity Tools</b>	<b>2.2 Presentation (6 Lessons)</b>	<p>By the end of the sub strand the learner should be able to:</p> <ul style="list-style-type: none"> <li>a) explain the importance of presentation productivity tools used in presentation creation,</li> <li>b) select a presentation productivity tool used for creating a presentation,</li> <li>c) create an interactive presentation for a target audience,</li> <li>d) deliver a slide presentation effectively on a topical area,</li> <li>e) appreciate the emerging trends in presentation productivity tools</li> </ul>	<p>The learner is guided to:</p> <ul style="list-style-type: none"> <li>● brainstorm on the meaning and importance of productivity tools used for creating a presentation,</li> <li>● identify examples presentation software (e.g. LibreOffice Impress, PowerPoint, Keynote, Google Slides Canva) including their basic features,</li> <li>● explore methods of creating and editing a presentation,</li> <li>● create and edit slides by incorporating text, images, shapes, charts, multimedia elements, speaker notes, master slides and diverse templates,</li> <li>● apply various slide transition effects, add styles, and adjust presentation speeds to enhance presentation flow,</li> </ul>	<p>How can the presentation software be effectively used to create a visually appealing, informative, and interactive presentation that engages the audience.</p>



			<ul style="list-style-type: none"><li>● add interactivity in presentations by incorporating animations, transitions, interactive elements, and seamless slide navigation,</li><li>● add hyperlinks on the clickable elements such as text, images, or shapes, ensuring enhanced navigation,</li><li>● use the presentation presenter tools, such as the presenter view in Microsoft PowerPoint or Google Slides, to keep track of notes, timings, and upcoming slides,</li><li>● engage the audience with interactive elements in a presentation created of a topical issue in the community.</li><li>● share experiences in emerging trends in</li></ul>	
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			presentation productivity tools	
<b>Core Competencies to be developed:</b> <ul style="list-style-type: none"> <li>• Self-efficacy: learner acquires the skill of effective communication when engaging the audience with interactive elements in a presentation created of a topical issue in the society.</li> <li>• Imagination and creativity: learner explores new ideas when adding interactivity in presentations by incorporating animations, transitions, interactive elements.</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>• Responsibility: learner engages in assigned roles when creating and editing slides by incorporating text, images, shapes, charts, multimedia elements, speaker notes, master slides and diverse templates</li> <li>• Patriotism: learner respects fellow learners as citizens when engaging the audience with interactive elements in a presentation created of a topical issue in the community.</li> </ul>				
<b>Pertinent and Contemporary Issues (PCIs):</b> Social-awareness skills: learner is assertive when engaging the audience with interactive elements in a presentation created of a topical issue in the society.				



Strand	Sub strand	Suggested learning outcomes	Suggested learning experiences	Suggested Key Inquiry Questions
<b>2.0 Productivity Tools</b>	<b>2.3 Desktop Publishing</b>  <b>(8 lessons)</b>	By the end of the sub strand, the learner should be able to; a) explain the importance of desktop publishing tools in document publication b) select a desktop publishing tool to be used for producing publications. c) create a publication using desktop publishing tools to achieve a professional appearance. d) share a publication created in a desktop publishing tool, e) appreciate emerging trends in DTP productivity tools.	Learner is guided to: <ul style="list-style-type: none"> <li>• brainstorm on the meaning and importance of desktop publishing tools in document publication.</li> <li>• use print or digital media to search for examples and categories of DTP application which include which Open Source: (e.g. Scribus, LibreOffice Draw, Scribble) and Non-Open Source:( Adobe InDesign, QuarkXPress, Affinity Publisher, Microsoft Publisher) used for creation of a publication and share with peers,</li> <li>• perform tasks which include creating, saving, navigating, closing, and retrieving a publication,</li> <li>• creation of a publication with the aid of the key features of desktop publishing tool</li> <li>• use editing tools in a desktop publishing tool to refine a publication created, ensuring a professional appearance.</li> </ul>	How does Desktop publishing software make creating and designing professional quality publications easier?



			<ul style="list-style-type: none"> <li>• in turn share a publication created in DTP tool through a hard copy, pdf, email, upload</li> <li>• tools</li> <li>• integrate a publication with other applications, apply mail merge to personalize the final publication.</li> <li>• engage a resource person about emerging trends in DTP productivity tools</li> </ul>	
<b>Core Competencies to be developed:</b> <ul style="list-style-type: none"> <li>• Creativity and imagination: learner explores s new ideas when creating and applying formatting features using a desktop publishing tool required to have a document with processional outlook.</li> <li>• Critical Thinking and problem solving: learner acquires researching skills when exploring a real-world setting to find examples of software used to produce publications.</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>• Respect: learner appreciates effort of others when brainstorming on the meaning and importance of desktop publishing tools</li> <li>• Unity: learner is cooperative when engaging a resource person about emerging trends in DTP productivity tools.</li> </ul>				
<b>Pertinent and Contemporary Issues (PCIs):</b> Social-awareness skills: leaner ‘s effective communication skills are enhanced when brainstorming on the meaning and importance of desktop publishing tools.				



### Suggested Assessment Rubric

<b>Level Indicator</b>	<b>Exceeds expectations</b>	<b>Meets expectations</b>	<b>Approaches expectations</b>	<b>Below expectations</b>
Ability to create a text document using word processing productivity tools.	Creates a text document with advanced formatting, including headers, footers, styles, and advanced layout features using word processing productivity tools.	Creates a text document with advanced formatting, including headers, footers, styles using word processing productivity tools.	Creates a text document with basic formatting, and basic formatting tools using word processing productivity tools.	Struggles to format the text document correctly, with minimal use of formatting tools using word processing productivity tools.
Ability to create an interactive presentation for a target audience.	Creates an interactive presentation for a target audience using creative and visually appealing design elements that enhance understanding and engagement.	Creates an interactive presentation for a target audience using creative appealing design elements that support understanding and engagement.	Creates an interactive presentation for a target audience using basic design elements with limited creativity.	Creates an interactive presentation for a target audience with no creativity in design elements.
Ability to create a publication using desktop publishing tools to achieve a	Demonstrates advanced proficiency in using desktop publishing tools to create and manipulate text, images, graphics, and layout elements effectively.	Demonstrates proficient use of desktop publishing tools to create and manipulate text, images, graphics, and layout elements effectively.	Demonstrates basic proficiency in using desktop publishing tools. Use of text, images, graphics, and layout elements is limited	Demonstrates limited proficiency in using desktop publishing tools. Use of text, images, graphics, and layout elements is absent



### STRAND 3.0: INTERNET AND WEB TECHNOLOGIES

Strand	Sub strand	Suggested learning outcomes	Suggested learning experiences	Suggested Key Inquiry Questions
<b>3.0 Internet and Web Technologies</b>	<b>3.1 The Internet (6 Lessons)</b>	By the end of the sub strand the learner should be able to: a) explain the purpose of the internet in the society b) explore the common services offered through the internet for various needs and interests c) identify the fundamental components required to set up an internet connection. d) use search engine to gather relevant information e) use email application to communicate with peers f) appreciate the positive impacts of the internet on society	The learner is guided to: <ul style="list-style-type: none"><li>• brainstorm on the meaning, history and purpose of the Internet</li><li>• use print or digital media to search for the meaning of common terms used in the internet such as intranet, www, extranet, website, webpage, URL, Server, web browser, search engine, web application, Internet service provider and surfing</li><li>• identify common services offered through the internet for various needs and interests such as communication, e-commerce, education, social media, financial services, remote work tools, gaming.</li><li>• research and present information on the fundamental components required to set up an internet connection.</li></ul>	How can the Internet be harnessed to facilitate communication and information gathering?



			<ul style="list-style-type: none"><li>• simulate setting up an internet connection using provided equipment such as hotspot, ethernet cables, wireless routers, tethering and portable hotspot</li><li>• use search engines to find and access information on the internet (keyword search, operators, filters, Boolean operators, related search, autocomplete, settings, images and videos)</li><li>• compose and send an email to peers.</li><li>• customise aspects of email application to suit workflow, enhance productivity, and effectively manage emails (account setup, organize folders, email filters, notifications, signature, default settings, security, sync settings, layout customization, backup and storage)</li><li>• explore and share experiences of positive impacts of the internet on various aspects of society</li></ul>	
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			<ul style="list-style-type: none"> <li>• share experiences on the positive impact of the Internet on society</li> </ul>	
<b>Core Competencies to be developed:</b> <ul style="list-style-type: none"> <li>• Learning to learn: learner develops research skills when using digital media to search for the meaning of common terms used in the internet such as intranet, www, extranet, website, webpage, URL, Server, web browser, search engine, web application, Internet service provider and surfing</li> <li>• Self-efficacy: learner acquires effective communication skills when sharing experiences on positive impacts of the internet on various aspects of society</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>• Respect: learner is open minded when sharing experiences on the positive impact of the Internet on society</li> <li>• Responsibility: learner engages in assigned roles and duties when simulating setting up an internet connection using provided equipment such as hotspot, ethernet cables, wireless routers, tethering and portable hotspot</li> </ul>				
<b>Pertinent and Contemporary Issues (PCIs):</b> Online Safety: learner observes online safety measures when using internet to search for information and communicate through sending and receiving emails.				



Strand	Sub strand	Suggested learning outcomes	Suggested learning experiences	Suggested Key Inquiry Questions
<b>3.0 Internet and Web Technologies</b>	<b>3. 2 Digital Communication (10 lessons)</b>	<p>By the end of the sub strand the learner should be able to:</p> <ol style="list-style-type: none"> <li>explain the importance of digital communication in the society.</li> <li>identify online platforms used to support digital communication</li> <li>use digital online platforms to communicate</li> <li>use online forums to collaborate and share content</li> <li>appreciate the impact of Artificial Intelligence (AI) in digital communication platforms</li> </ol>	<p>The learner is guided to:</p> <ul style="list-style-type: none"> <li>brainstorm on the meaning and importance of digital communication in the society.</li> <li>search for information on digital communication platforms used for personal and professional communication, such as email, chat apps, video conferencing, instant messaging (IM), collaboration platforms, learning management and social media.</li> <li>explore the key features of online platforms used to support digital communication such as user profiles, customisable interfaces, accessibility, search functionality, privacy and security, integration with other services, support and help resources.</li> </ul>	<p>How can various digital communication platforms be effectively utilised to create communication, connection and learning?</p>





			<ul style="list-style-type: none"><li>● use various online digital platforms such as social media to communicate with peers such as discussion forums where students can post questions and answer on any topical issue.</li><li>● explore various digital collaboration tools such as cloud-based documents platforms (Google Docs, Zoho docs), file-sharing services platforms (Dropbox, Google drive, One drive), and project management platforms (Asana, Jira)</li><li>● use digital collaboration tools like cloud-based document platforms, file-sharing services platforms, and project management platforms to work collaboratively, share resources, manage projects, and enhance productivity through seamless communication and real-time updates.</li><li>● evaluate different types of video and audio streaming media platforms such as YouTube, Prime Video, Netflix, Apple Music, Amazon, Facebook Live, Spotify, Apple Music.</li></ul>	
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			<ul style="list-style-type: none"> <li>● use audio or video-based platforms to create podcasts on various subjects, allowing learners to share learning experiences</li> <li>● share experiences on the positive impact of the Internet on society</li> </ul>	
<b>Core competencies to be developed</b> <ul style="list-style-type: none"> <li>● Communication and Collaboration: learner acquires listening and speaking skills when sharing experiences on the positive impact of the Internet on society.</li> <li>● Critical thinking and problem solving: learner develops evaluation and decision making when evaluating different types of video and audio streaming media platforms.</li> </ul>				
<b>Values:</b> <ul style="list-style-type: none"> <li>● Integrity: learner has self-discipline when using audio or video-based platforms to create podcasts on various subjects, allowing learners to share learning experiences</li> <li>● Peace: learner has respect self and others when brainstorm on the meaning and importance of digital communication in the society</li> </ul>				
<b>Pertinent and Contemporary Issues (PCIs):</b> Online safety: learner uses internet responsibly when using various online digital platforms such as social media to communicate with peers such as discussion forums where students can post questions and answer on any topical issue.				



Strand	Sub strand	Suggested learning outcomes	Suggested learning experiences	Suggested Key Inquiry Questions
<b>3.0 Internet and Web Technologies</b>	<b>3.3 Digital Citizenship</b>  (6 Lessons)	By the end of the sub strand the learner should be able to a) explore the importance of being a good digital citizen in an online environment b) identify appropriate netiquette behaviours in an online environment c) observe appropriate netiquette behaviours in an online environment d) observe healthy practices when using ICT technologies e) analyse practices for environmental conservation to mitigate degradation caused by the use of digital technology.	The learner is guided to: <ul style="list-style-type: none"> <li>● brainstorm on the importance of being a good digital citizen in an online environment</li> <li>● search for information on what constitutes netiquette behaviours and present the findings.</li> <li>● analyse and present real-world online scenarios (emails, forum posts, social media interactions) and identify netiquette issues and suggest improvements.</li> <li>● brainstorm on some of the unethical behaviours on the internet.</li> <li>● evaluate information encountered in the internet in order to identify potential biases, misinformation, and the credibility of sources.</li> <li>● role-play taking different online personas while adhering to netiquette behaviours and have reviews by their peers.</li> </ul>	How can I use digital technologies responsibly and responsively?



		f) appreciate the importance of responsible use of technologies	<ul style="list-style-type: none"> <li>● use online platforms to simulate appropriate netiquette behaviours in an online environment</li> <li>● discuss the importance of maintaining positive and responsible digital footprints</li> <li>● adjust privacy settings on various online platforms (e.g., social media, email) to control the visibility of personal information.</li> <li>● maintain healthy personal practices when using digital devices</li> <li>● identify healthy ergonomic requirements in the user environment</li> <li>● brainstorm on good practices necessary for environmental conservation resulting from the use of digital technology (energy efficiency, electronics recycling, digital waste management)</li> </ul>	
<b>Core Competencies to be developed:</b> <ul style="list-style-type: none"> <li>● Critical thinking and problem solving: learner acquires reflection skills when analysing and presenting real-world online scenarios (emails, forum posts, social media interactions) and identify netiquette issues and suggest improvements.</li> <li>● Self-efficacy: learner acquires leadership skills when role-playing taking different online personas while adhering to netiquette behaviours and having reviews by their peers.</li> </ul>				

**Values:**

- Responsibility: learner engages in assigned roles when evaluating information encountered in the internet in order to identify potential biases, misinformation, and the credibility of sources.
- Unity: learner strives to achieve common goal when role-play taking different online personas while adhering to netiquette behaviours and have reviews by their peers

**Pertinent and Contemporary Issues (PCIs):**

Online safety: learner prevents cybersecurity threats when adjusting privacy settings on various online platforms (e.g., social media, email) to control the visibility of personal information



### Suggested Assessment Rubric

<b>Level Indicator</b>	<b>Exceeds expectations</b>	<b>Meets expectations</b>	<b>Approaches expectations</b>	<b>Below expectations</b>
Ability to use email application to communicate with peers	Demonstrates advanced proficiency in using email application features to communicate with peers	Demonstrates proficient use of email application features to communicate with peers	Demonstrates basic proficiency in using email application features to communicate with peers	Demonstrates limited proficiency in using email application features to communicate with peers.
Ability to use online forums to collaborate and share content	Demonstrates advanced proficiency in using online forum features to collaborate and share content	Demonstrates proficient use of online forum features to collaborate and share content	Demonstrates basic proficiency in using online forum features to collaborate and share content	Demonstrates limited proficiency in using online forum features to collaborate and share content
Ability to observe appropriate netiquette behaviours in an online environment	Always observes appropriate netiquette behaviours in an online environment	Mostly observes appropriate netiquette behaviours in an online environment	Attempts to observe appropriate netiquette behaviours in an online environment	Frequently disregards observing appropriate netiquette behaviours in an online environment



## APPENDIX: SUGGESTED ASSESSMENT METHODS, LEARNING RESOURCES AND NON-FORMAL ACTIVITIES

Strands	Sub Strands	Suggested Assessment Methods	Suggested Learning Resources	Suggested Non-Formal Activities
<b>1.0 ICT and Society</b>	1.1 Introduction to ICT	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> </ul>	<ul style="list-style-type: none"> <li>• Televisions</li> <li>• Radios</li> <li>• Mobile Phones</li> <li>• Computers</li> <li>• Tablets</li> </ul>	Learners take a walk around the school and identify technologies used in communication
	1.2 Application areas of ICT	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> </ul>	<ul style="list-style-type: none"> <li>• Video clips</li> <li>• Charts</li> <li>• Digital devices</li> <li>• Application software</li> </ul>	Learners visit school offices, supermarket and learn how ICTs are used
	1.3 Operating systems	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> <li>• Practical activity</li> </ul>	<ul style="list-style-type: none"> <li>• Digital devices such as; computer, laptop, smart phone, tablets</li> <li>• Application software</li> <li>• Internet</li> </ul>	Learners create files and folders during clubs and societies



Strands	Sub Strands	Suggested Assessment Methods	Suggested Learning Resources	Suggested Non-Formal Activities
<b>2.0 Productivity Tools</b>	2.1 Word Processing	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> <li>• Project</li> <li>• Practical work</li> <li>• Portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Digital devices such as; computer, laptop, smart phone, tablets</li> <li>• Word processing software</li> <li>• Internet</li> </ul>	Learners use computer labs during clubs and societies and practice word processing activities.
	2.2 Presentation	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> <li>• Project</li> <li>• Practical work</li> <li>• Portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Digital devices such as; computer, laptop, smart phone, tablets</li> <li>• Presentation software</li> <li>• Internet</li> </ul>	Learners assist members of community to create presentation for various use





Strands	Sub Strands	Suggested Assessment Methods	Suggested Learning Resources	Suggested Non-Formal Activities
	2.3 Desktop Publishing	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> <li>• Project</li> <li>• Practical work</li> <li>• Portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Digital devices such as; computer, laptop, smart phone, tablets</li> <li>• Desk Publishing software</li> <li>• Internet</li> </ul>	Learners create publications in the community for various use
3.0 Internet and Technologies	3.1 The Internet	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> <li>• Practical work</li> </ul>	<ul style="list-style-type: none"> <li>• Digital devices such as; computer, laptop, smart phone, tablets</li> <li>• Internet</li> <li>• Application software</li> </ul>	Learners use emails to communicate with their peers, mentors and parents during the school holidays and when at home
	3.2 Digital Communication	<ul style="list-style-type: none"> <li>• Oral tests</li> <li>• Observation</li> <li>• Checklist</li> <li>• Written test</li> <li>• Rubrics</li> <li>• Project</li> <li>• Practical work</li> </ul>	<ul style="list-style-type: none"> <li>• Digital devices such as; computer, laptop, smart phone, tablets</li> <li>• Internet</li> <li>• Application software</li> <li>• Social media platforms</li> </ul>	Learners use social media collaboration tools to communicate with their peers, mentors and parents during the school holidays and when at home



Strands	Sub Strands	Suggested Assessment Methods	Suggested Learning Resources	Suggested Non-Formal Activities
	3.3 Digital Citizenship	<ul style="list-style-type: none"><li>• Oral tests</li><li>• Observation</li><li>• Checklist</li><li>• Written test</li><li>• Rubrics</li></ul>	<ul style="list-style-type: none"><li>• Digital devices such as; computer, laptop, smart phone, tablets</li><li>• Internet</li><li>• Video clips</li></ul>	Learner educates the community how to use internet and social media responsively



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