ZIMBABWE

MINISTRY OF PRIMARY AND SECONDARY EDUCATION

INFORMATION COMMUNICATION TECHNOLOGY (ICT)

JUNIOR (GRADE 3-7) SYLLABUS

(2015 - 2022)

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1.0 PREAMBLE

1.1 Introduction

The ICT syllabus is one of nine learning areas at Junior level as noted in the reviewed Curriculum Framework. It provides a broad perspective on the basic knowledge and practical skills on how to use and apply a variety of technologies in everyday life. The syllabus intends to equip learners with the general understanding of how information systems are designed to suit particular applications and how such systems work. The ICT syllabus is intended to be infused within other subjects in the school curriculum.

The syllabus will follow a developmental approach that will lead learners to grow into a mature relationship with ICT throughoutthe Junior education course.

1.2 Rationale

ICT requires learners to pay rigorous attention to developing adequate life and career skills. It adequately equips today's learners in entry-level work and beyond, in further study and lifelong learning, and in their personal lives as inquisitive, reflective, discerning and caring citizens. ICT is significantly enhancing and altering human activities, enabling us to live, work and think in ways that most of us never thought possible. Since technology has an increasingly significant impact, and such broad implications for every individual, groups and entire nation, learners must be prepared to understand, use and apply ICT in effective and efficient ways.

1.3 Summary of Content

The Junior School ICT syllabus covers theory and practical activities in areas such as drawing, programming and designing. This enables learners to be exposed to a wide variety of ICT tools and programmes which develop expertise, originality, confidence, self-identity (Unhu/Ubuntu/Vumunhu) and ability to communicate. ICT provides unique opportunities for scaffolding and supporting learners with special learning needs, and learners from culturally or linguistically diverse backgrounds. The use of ICT encompasses enterpriseskills, a significant contributor to the socio-economic transformation of the nation.

1.4 Assumptions

The syllabus assumes that learners:

- are able to manipulate some electronic tools at home
- have innate desire to explore the basic elements and principles of design
- have an appreciation of ICT tools
- are confident in dealing with complexities
- are able to communicate and work with others to achieve a common goal or solution.

1.5 Cross-Cutting Themes

ICT learning area will encompass and have a universal thrust on the following cross cutting themes:

- Financial Literacy
- Collaboration
- HIV and AIDS
- Heritage Studies
- Child Protection
- Gender
- Environmental Issues
- Disaster Risk Management

2.0 PRESENTATION OF THE SYLLABUS

The syllabus is presented as a single document catering for the junior level.

3.0 AIMS

The syllabus aims to enable learners to:

3.1 appreciate the role and impact of ICTs as they apply to self, work and society

3.2 develop an understanding of the operating skills required in a variety of technologies and acquire enterprise skills using ICTs

3.3 be creative and innovative in solving problems through ICTs

3.4 infuse ICTs in other learning areas across the curriculum apply moral and ethical approaches to the use of technology and create cultural heritage awareness, its preservation and development using ICTs.

4.0 SYLLABUS OBJECTIVES

By the end of the course, learners should be able to:

4.1 identify ICT tools in the environment

4.2 create a computer based solution from a given problem statement

4.3 operate ICT tools to achieve specific tasks

4.4 manipulate data using ICTs

4.5 apply the elements and principles of design

4.6 present information in a variety of forms

4.7 archive cultural information using ICTs

4.8 infuse ICT into other learning areas

4.9 demonstrate the effectiveness of computer use, safety and security.

4.10 demonstrate enterprise skills

5.0 TOPICS

5.1 ICT Tools

5.2 Creating and Publishing

5.3 Computer Software

5.4 Safety and Security

5.5 The World Wide Web and Online Collaboration

5.6 ICT Enterprise

5.7 Programming

5.8 Communication and Networks

6.0 SCOPE AND SEQUENCE

TOPIC	GRADE 3	GR 4	GR5	GR6	GR7
ICT TOOLS	• Types of Computers	• Computer peripherals	• Fault diagnosis and fixing	• Hardware And Software Maintenance	• Faults in ICT Tools
CREATING AND PUBLISHING	• Charts • Bar Graphs • Pictograms • Images • Database Principles	• Presentations • Slide show of drawings • Databases	• Animation • Databases	• Database forms and reports	• Database queries
COMPUTER SOFTWARE	• Uses of software • Text Input • File management • Multimedia	• Desktop Publishing • File management • Multimedia	• Sending and receiving information (VoIP) • Multimedia	• Spreadsheets • Installation of software • Data storage • Multimedia	• Multimedia
SAFETY AND SECURITY	• Passwords	• Computer Viruses	• Cyber Wellness	• Hacking	• Firewalls • Antivirus • Data Legislation
THE WORLD WIDE WEB AND ONLINE COLLABORATION	• Web page • Search Engines • Information Presentation • e-Messages	• Web page • Search Tools • Search engines • Information Presentation • e-Messages	• Surfing the Internet • E-mail	• Web Page • Surfing the Internet • Mailbox • Web design	• Surfing the Internet • Web design
ICT ENTERPRISE	• Data capture clerk • Sound technician	• Computer Operator • Copyist	• Digital Photographer	• Web Developer	• ICT Careers • Web Designing • Software Technicians • Network Technicians

TOPIC	GR3	GR4	GR5	GR6	Gr7
PROGRAMMING	• Sequence of Instructions	• Sequence of Instructions	• Programming Games	• Non-gaming	• Text based Programming
COMMUNICATION AND NETWORKS			• Network Types • Network Connectivity • Network Topologies • Network Components	• Network Types • Network Connectivity • Network Topologies • Network Components	• Cable design • Network Setup • Peer to peer Connections • Mobile Networks • Internet Services

7.0 Competency Matrix

Grade 3

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.1 ICT TOOLS	• identify different types of personal computers • distinguish different types of computers • use any type of computer	• Types of Computers - Desktop - Laptop - Palmtop such as Smart phone, Tablet	• Naming different types of computers • Matching computer pictures with their names • Describing different types of computers • Operating any type of computer	• Picture clips of computers, desktop, laptop, palmtops
7.2 CREATING AND PUBLISHING	• create graphs • ammend created graphs • interpret any given graph • present information in different forms	• Charts - Bar Graphs - Pictograms	• Using a graphing package to create a graph • Adding labels and amending the charts • Deducing information from graphs • Showing the same information on different graphs	• Ms Excel, Computers, printed graphs
	• take photographs for a range of different purposes • add images and sound to a presentation • use presentation software to create basic presentations	• Images	• Capturing images for a range of different purposes • Downloading images from a digital camera • Creating basic presentations and adding images and sound	• Microsoft PowerPoint, open source presentation software, digital cameras, headsets with microphones
	• create branching databases • identify objects and questions to classify data	• Database Principles	• Constructing branching databases • Identifying objects using yes or no questions	• Text ease • Microsoft Word • Presentation

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.3 COMPUTER SOFTWARE	• identify the ICT appliances that use software at home, school and workplace • describe the functions of computer software at home, school and workplace	• Uses of software - Software in the home - Software in the school - Software in the workplace	• Naming ICT appliances that use software at home, school and workplace • Discussing the functions of computer software at home, school and workplace	• Intercom, computers, e-learning software, DSTV, remotes, life support systems
	• create a word-processing document • insert word art in a document • edit document using word processing tools	• Text Input - Adding images - Text boxes - Word art - Save and load their work • Formatting text - Font type - Font size - Font Colour	• Typing text and inserting images to create a printable document • Designing a document with word art • Changing text appearance	• Typing Tutor, MS Word, WordPad, computers, printers
	• identify given storage devices • insert a storage device • Retrieve information from storage devices	• File management - Memory cards - CD/DVDs - Flash disk	• Match storage device to its name • Practising insertion of storage devices • Opening files from storage devices using the appropriate application	• Memory cards, CDs, DVDs, Flash disks
	• Combine text, images and sound • record and store music, voice and video • explore sound and music in ICT using keyboards, and onscreen music software	• Multimedia - Text - Images - Sound	• Demonstrating how to combine text, images and sound to come up with a multimedia file • Recording each other singing using a range of tools • Composing and recording basic rhythms	• Computers, cameras, smartphones, drawings, picture clips, speakers. headsets, Moviemaker

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.4 SAFETY AND SECURITY	• create a password • modify a password • delete a password	• Password - relevance - creation - removal	• Creating passwords • Changing existing passwords • Removing a password	• Smartphones, Files, ICT Tools
7.5 THE WORLD WIDE WEB AND COLLABORATION ONLINE	• identify the components of a web page	• Web page	• exploring components of a web page stating web addresses, menu buttons and links	• Internet, printed web pages • Computers
	• identify search engines • use search tools and search engines to find information	• Search Engines	• recognising search engines • Entering given text into a search engine to find specific given web sites	• Internet, search engine like google, yahoo, ask.com • Computers
	• identify different forms of information (text, images, sound, multimodal) • use information from the internet to answer specific questions • formulate key questions and find information to answer them	• Information Presentation	• Recognising that information from the internet can either be in the form of text, images and sound. • Using web based resources to find answers to questions • Constructing questions about a specific topic and use information to answer those questions • Navigating within a website using hyperlinks and menu buttons to locate information	• Internet, search engine like Google, Yahoo, Ask.com • Computers
THE WORLD WIDE WEB AND COLLABORATION ONLINE *continued…*	• identify different ways that messages can be sent • send messages electronically over distances • reply to electronic messages	• e-Messages	• Discussing different ways that messages can be sent, (letters, telephone, email, text, instant messaging) • transmitting electronic messages using smart phones • Responding to electronic messages	• Smart phones, instant messaging software such as WhatsApp, Skype, Twitter

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.6 ICT ENTERPRISE	• state the roles of a data capture clerk and a sound technician • operate a PA System	• Data capture clerk • Sound technician	• Listening to a presentation from a data capture clerk and sound technician • Demonstrating how a PA system works	• PA system • Resource person e.g. Data Capture Clerk, Sound technician
7.7 PROGRAMMING	• outline how a computer processes instructions and commands • demonstrate that devices are controlled by a sequence of instructions or actions • create sequence of instructions for a variety of programmable devices • edit a sequence of instructions for a variety of programmable devices	• Sequence of Instructions - Programming	• Exploring floor objects such as turtles, logo, sprites • Inputting a sequence of instructions using icons • Drawing shapes by inputting a sequence of instructions • Modifying a sequence of instructions to follow a pattern or create a shape	• Turtle, logo, scratch

GRADE 4

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.8 ICT TOOLS	• identify input, output and storage devices • use appropriate computer peripheral devices • connect computer peripherals	• Computer Peripherals - Input Devices - Output Devices - Storage Devices	• Matching peripheral devices pictures to their names • Operating the computer peripherals • Connecting input and output devices	mouse, keyboard, touch pad, digital camera, scanner, printers, monitors, speakers, projectors, flash disk, optical disks, external hard drives, memory card
7.9 CREATING AND PUBLISHING	• create a presentation • import images into presentation • change slide layouts • add text descriptions to the slides	• Presentations • Slide Show with Drawings	• Designing presentation with drawings • Editing the layout of slides • Entering descriptive text on the slides	• Drawings, MS PowerPoint • Computers
	• add data to an existing database • use the data in an existing database to generate graphs and charts	• Databases - Tables	• Capturing data into an existing database • Using database software to create graphs and charts	• MS Access • Computers

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.10 COMPUTER SOFTWARE	• use desktop publishing tools to design cards • insert images to cards • format text on a card to enhance its appearance	• Desktop Publishing - Invitation cards - Compassionate cards - Anniversary cards	• Selecting the appropriate template to design a card • Adding appropriate images to cards • Modifying text on a card to enhance its appearance	• Desktop Publisher • Computers • Paint package
	• save files directly to data storage devices • rename files on a storage device • copy files to and from storage devices	• File management - Memory cards - CD/DVDs - Flash disks	• Storing files directly to storage devices • Changing existing file names • Transferring files between storage devices	• Memory cards, CDs, DVDs, Flash disks
	• create an image to support a piece of work, using drawing software • insert images that further support given written work • sing and record songs for a specific purpose	• Multimedia - images - audio - video	• Using a graphical package to create drawings • Adding appropriate images from a picture gallery on given written work • Demonstrating recording of songs using audio recording software	• Graphics software such as Paint, Tux paint • Digital camera • Digital video recorder
7.11 SAFETYAND SECURITY	• identify effects of computer viruses • state how computer viruses are spread • detect the presence of computer viruses	• Computer Viruses	• Watching the video clips on the dangers of computer viruses • Discussing the spread of computer viruses • Using antivirus software to scan and remove computer viruses	• Registered Antivirus software • Computers • Flash disks

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.12 THE WORLD WIDE WEB AND ONLINE COLLABORATION	• Bookmark webpages for future use • customize bookmarks	• Web page - bookmarks	• creating bookmarks for regularly visited webpages • using bookmarks to open a webpage • renaming bookmarks	• Internet • Computers
	• use search tools and search engines to find relevant information	• Search Tools • Search engines	• Selecting relevant links from search results • Rephrasing search text to improve search results	• Computers • Internet, search engine like Google, Yahoo, Ask.com
	• use different forms of information from the internet to answer specific questions	• Information	• Answering questions using information from the internet	• Computers • Internet search engines like Google, Yahoo, Ask.com
	• send and receive image and video messages electronically	• e-Messages	• Uploading and downloading image and video messages	• Smart phones, instant messaging software like Skype, Twitter
7.13 ICT ENTERPRISE	• state the role of a computer operator and copyist • photocopy, scan and print documents	• Computer Operator • Copyist	• Discussing the roles of computer operators and copyists • Photocopying, scanning and printing • Touring photocopying and printing companies	• Photocopier • Scanner • Printer • Resource person
7.14 PROGRAMMING	• create sequences of instructions for a variety of programmable devices • edit sequences of instructions for a variety of programmable devices • create basic applications • experiment the effect of changing variables	• Sequence of Instructions - Programming	• Giving instructions to objects • Modifying sequences of instructions • Using software to make basic puzzles and quizzes • changing parameters (e.g. time allowed, points, number of pieces to customize the puzzle or quiz (e.g. 2DIY)	• Free downloadable software such as Turtle, Logo and Scratch

GRADE 5

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.15 ICT TOOLS	• identify faults in ICT tools • relate a fault to a cause • fix problems within their scope	• Fault Diagnosis and Fixing - Common Faults - Troubleshooting	• Discussing common ICT faults • Carrying out a visual inspection looking for obvious signs of problems and tracing a fault to its origin • Resolving ICT faults	• Contrived faults • Video clips on fault diagnosis and fixing • Resource person
7.16 CREATING AND PUBLISHING	• create images using an art/drawing package • create and edit digital video and/ or animation • create, refine and review stop-motion animation videos	• Animation - Drawings - Pictures - Text	• Drawing and animating images based on scenarios within their local environment • Editing animations • Demonstrating stop motion animation	• Scratch • Monkey jam
	• design and create a basic database • create tables in design view • manipulate records in a table (update, delete, edit) • filter data in database	• Databases - tables - records - key fields	• Planning and creating their own database • Creating fields and inserting the primary key fields • Modifying records by either deleting, editing or updating • Sorting records in ascending or descending order using a given field • Using a filter to select records that meet a particular criteria	• Database packages such as MS Access

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.17 COMPUTER SOFTWARE	• upload educational files using instant message software • download educational files using instant message software	• Uploading / Sending • Downloading /Receiving • VoIP	• Uploading files onto instant messaging software • Downloading educational files • Making video conferencing calls	• MSN, Yahoo, Hangouts, Skype
	• create multimedia presentations • edit multimedia presentations • use software to compose own music	• Multimedia - Presentations - Composing music	• Designing presentations in order to share information with the class • Adding audio, text and images to slides • Composing and recording music using musical software	• Music composition software such as Black Cat Compose • Sound Manipulation such as Audacity • Sound Capture Microphone and digital sound recorder
7.18 SAFETY AND SECURITY	• explain the dangers associated with using the internet • suggest ways of ensuring cyber safety • design posters on cyber wellness	• Cyber wellness	• Discussing dangers associated with the internet • Practising safety precautions when using the internet • Carrying out awareness campaigns on cyber wellness • Designing posters on cyber wellness	• Posters and video clips on cyber wellness • Resource person • Desktop Publishing software

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.19 THE WORLD WIDE WEB AND ONLINE COLLABORATION	• use short search terms to make searches more effective • use sites that are recognised to gather information • scan-read webpages to find information • interact with peers from another school	• Surfing the Internet - Researching	• Constructing short and relevant search terms • Gathering information from recognised educational websites • Scanning web pages and their content to gather information • Collaborating with peers on a project to produce a finished piece to support topic work • Refining contributions to a shared document	• Computers • Internet, Search engines like Google, Yahoo, Ask.com
	• explain how e-mail works • describe the structure of an e-mail address • create an e-mail account • compose and send a message • log onto an e-mail account	• e-mail - e-mail accounts - logging in and out	• Discussing how e-mail works • Explaining the structure of an e-mail address • Demonstrating how to create an account • Creating and sending a message • Signing in and out of an e-mail account	• Internet • Free e-mail account such as Yahoo, Gmail, Outlook
7.20 ICT ENTREPRISE	• state the role of a Digital Photographer • capture photos • record videos • edit photos and videos • print photos	• Digital Photographer - photo editing - video editing	• Discussing the roles of a Digital Photographer • Capturing photos and record videos for various events • Editing photos and videos • Printing photos	• Digital cameras, Scanner, DVD Movie Maker, Adobe Photoshop, Printer
7.21 PROGRAMMING	• use templates on a computer to create a game, which can be controlled by external inputs • plan and sequence instructions whilst predicting their result • modify parameters and algorithms and view the effect this has on the response	• Programming Games	• Using templates to create games • Plan a set of instructions before testing and refining them • Changing parameters and observing the responses	• Computer game software such as 2DIY

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.22 COMMUNICATION AND NETWORKS	• identify different types of networks and their benefits • compare different types of networks • connect to wired networks	• Network types - LAN - WAN • Network connectivity - wired	• Discussing different types of networks and their benefits • Examining and taking note of similarities and differences of network types • Linking a computer to a wired network • Conducting educational tours	• Network models • Routers • Switches • Network cables • Video clips • Resource person
	• identify network topologies • explain network topologies • draw a stated logical network topology	• Network topologies - star - ring - bus	• Discussing network structures • Researching on network topologies • Drawing different network topologies	• Network models • Routers • Switches • Network cables • Resource person • Internet
	• identify network components • configure a network • use networked resources	• Network components	• Matching network components to names • Setting up a network • Transferring files via Bluetooth and wireless devices • Sharing files and printers on a network	• Picture clips • Routers • Switches • Network cables • Internet

GRADE 6

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.23 ICT TOOLS	• maintain ICT tools • run software maintenance tools • schedule antivirus scans	• Hardware maintenance • Software maintenance	• Keeping ICT tools safe from environmental hazards • Executing software maintenance tools • Scheduling antivirus scans	• PC blower • PC cleaner kit • Dust covers • Protective covers • Software maintenance tools such as disk defragmentation, error checking, backup, antivirus software
7.24 CREATING AND PUBLISHING	• create and enter data into a database table • filter data according to different attributes • use sorting tools in response to a problem • design forms and reports using wizard	• Database - forms - reports	• Capturing data into a database table • Extracting records using a required criteria • Presenting records in either ascending or descending order • Creating forms and reports using wizard	• Database packages such as MS Access
7.25 COMPUTER SOFTWARE	• create a spreadsheet • use formulae to perform calculations • produce graphs from data • search data to solve a problem • sort data to solve a problem • filter data to solve a problem	• Spreadsheets - Structure - Formulas: MAX, MIN, AVE, COUNT, SUM - Charts - Sorting	• Entering data into a spreadsheet • Performing mathematical calculations using spreadsheet formulae • Creating charts from data • Applying sort and filter to data	• Spreadsheet program such as MS Excel

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
COMPUTER SOFTWARE continued...	• install software • uninstall software	• Software installation • Uninstalling software	• Demonstrating installing and uninstalling software	• Software
	• store data onto a cloud	• File management - Cloud computing	• Researching on cloud computing • Discussing the benefits of cloud computing • Saving data onto a cloud	• Internet, Cloud Accounts such as Google drive and Dropbox
	• explore 2D and 3D images to create accurate representations of objects • edit properties of images • record a video with good quality sound • animate images	• Multimedia - 2D models - 3D models - transformation	• Producing 2D and 3D models based on socio-cultural context • Using crop, edit and rotate to transform images • Recording videos on educational related events • Adding animation to images	• Video cameras, Purple Mash: 2Paint, 2Animate, 2design and Make, 2Publish Extra, Image editing Photo simple, Picasa, Microsoft Picture Manager, Microsoft Movie Maker, Black Cat Compose and digital sound recorder
7.26 SAFETY AND SECURITY	• identify the effects of hacking • list the methods of minimizing the effects of hacking	• Hacking - firewalls - encryption	• Discussing the effects of hacking • Demonstrating ways of reducing the effects of hacking such as data encryption, avoid storing passwords on web browsers • Watching videos on the effects and prevention of hacking	• Internet • Antiviruses • Computers • Video clips

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.27 THE WORLD WIDE WEB AND ONLINE COLLABORATION	• identify different sections of a web page • navigate a web page to locate specific information	Web page - graphics - hyperlinks -text	• Exploring different sections of a web page including hyperlinks • Searching a web page to locate information	• Internet, computers, web browsers such as Google Chrome, Mozilla, Internet Explorer, Opera
	• Upload and download relevant files to and from an online educational platform • use search engines to retrieve information • outline copyright issues • use information from the internet responsibly, ensuring that all information is accurate	Surfing the Internet	• Uploading and downloading relevant files to and from an online educational platform area • Constructing keywords to find different sources of information • Discussing issues of intellectual copy right and downloading of material	• Internet, search engine like Google, Yahoo, Ask.com • Office 365 • Computers
	• explore the email environment • send and receive e-mail • attach files to an e-mail • manage mailbox	• Mailbox - Compose - Send - Attachments - Inbox - Drafts - Outbox - Contacts - spam	• Sending and receiving e-mails using the 'cc' and 'bcc' fields • Uploading, downloading and saving e-mail attachments • Blocking unsolicited e-mails by reporting them as spam	• Internet, web-based e-mail accounts such as Yahoo, Gmail accounts
	• create a web page by saving a file in html format • publish a presentation as a web page • use web programming software to create a web page	• Web Design	• Designing a webpage by converting a file into an html format • Converting presentations into webpages • Using templates from a web programming software to create a webpage	• Joomla, Word Press, presentation package such as MS Power point, Word Processor
7.28 ICT ENTERPRISE	• explain the roles of a web developer • identify professionals that work with a Web Developer	• Web Developer	• Discussing the roles of a Web Developer • Asking and responding to questions from a Web Developer • Conducting educational tours to web designing companies	• Expert guest presentation • Print and electronic media

TOPIC	LEARNING OBJECTIVES • Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.29 PROGRAMMING	• use templates on a computer to create solutions to given scenarios • plan and sequence instructions whilst predicting their result • modify parameters and algorithms and investigating the effect this has on the response	• Non-gaming software	• Using a range of assisted programming software to plan, design and create basic software • Using visual programming based software to plan, design and create non-gaming software • Controlling the movement and responses of different elements using assisted programming software	• Scratch, Kodu
7.30 COMMUNICATIO N AND NETWORKS	• identify different types of networks • describe the benefits and risks of network computing • compare different types of networks • distinguish between wired and wireless connectivity • connect to a wireless network	• Network types - MAN - PAN • Network connectivity - wireless	• Examining the different types of networks • Discussing the benefits and risks of using networks • Explaining different types of networks • Discussing the differences between wired and wireless connectivity • Connecting to a wireless network • Conducting educational tours	• Network models • Routers • Switches • Network cables • Video clips • Resource person
	• research on network topologies • draw network topologies • design network topology models	• Network topologies -star -ring -bus	• Sketching different network configurations • Researching on network topologies • Creating network topology models	• Network models • Routers • Switches • Network cables • Resource person • Internet
	• list network components • configure a network • use networked resources	• Network components	• Discussing network components • Setting up a network • Transferring files via a wired and wireless network • Sharing resources on the network	• Pictures clips • Print media • Routers • Switches • Network cables • Internet

GRADE 7

TOPIC	LEARNING OBJECTIVES • Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.31 ICT TOOLS	• identify faults • find possible fault origins • fix and replace non-functional components • assemble and disassemble ICT tools	• Faults in ICT Tools	• Diagnosing faults • Troubleshooting causes of faults • Repairing broken down ICT tools • Assembling and disassembling ICT tools • Conducting educational tours to electronic manufacturing companies	• Professional Tools kit, non-working ICT tools • Resource Person
7.32 CREATING AND PUBLISHING	• use query design wizard to create queries • query a database • modify queries to refine search results • design reports using wizard	• Database queries	• Retrieving records using a required criteria • Running database queries • Editing current queries • Creating reports using report wizard	• Database packages such as MS Access
7.33 COMPUTER SOFTWARE	• alter images • add information to an existing image in order to relay information in a graphical way • cut elements from one image and paste them in another • plan and compose a video clip • download, organise and edit video clips	• Multimedia • Morphing	• Cropping, editing and arranging images in order to create a new image • Planning, composing and recording a video interview with a character • Reviewing, downloading and editing a video clip	• Cameras, Windows Movie Maker, Dazzle, Microsoft Picture Manager, free morphing
7.34 SAFETY AND SECURITY	• install antivirus software • configure firewalls • use firewalls and antivirus • update antivirus software	• Firewalls • Antivirus	• Demonstrating installing antivirus • Setting up a firewall • Scanning ICT tools (hardware and software) and cleaning viruses • Updating antivirus definitions	• Registered Antivirus software • Internet
	• explain the importance of the data protection legislation • interpret the data protection legislation	• Data Legislation	• Discussing the data protection laws in Zimbabwe • Role playing the data protection legislation	• Data Protection Act

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.35 THE WORLD WIDE WEB AND ONLINE COLLABORATION	• use increasingly effective search terms to find information • download freely available educational material	• Surfing internet	• Applying suitable search terms to make more effective searches • Downloading freely available relevant educational material	• Search engines such as Google Sites, MSN, Yahoo, Bing • Internet
	• use web programming software to create a web page • design a school website • upload information onto the school website • evaluate other websites	• Web design	• Using templates from a web programming software to create a webpage • Building a website following prescribed steps • Uploading text, images and videos to a website • Reviewing other websites	• Joomla, Word Press • Internet
7.36 ICT ENTERPRISE	• identify career opportunities • outline the roles of different IT personnel	• ICT Careers - Software Developer - Hardware Technician - Database Administrator - Network Technician	• Discussing the roles of different careers • Asking and responding to questions from Resource Persons • Conducting educational tours to ICT companies	• Expert guest presentations • Print and electronic media
7.37 PROGRAMMING	• describe how computers process instructions and commands • create a basic software program • control an on screen icon using text based programming	• Text based programming - flow charts	• Drawing program flow charts • Using a range of visual based programming software to plan and design basic software • Demonstrating use of text based controls • Viewing source code	• Scratch and Kodu

TOPIC	LEARNING OBJECTIVES Learners should be able to:	CONTENT/ COMPETENCIES	SUGGESTED ACTIVITIES AND NOTES	SUGGESTED RESOURCES
7.38 COMMUNICATION AND NETWORKS	• design a network cable	• Cable design - RJ45 cables	• Using a crimping tool to produce network cables • Testing network cables	• Network cables • RJ45 connectors, booths
	• configure a network • access network resources	• Network setup • Peer to peer connections	• Setting up a peer to peer network • Accessing resources on a peer to peer network	• Network cables • ICT Tools
	• identify types of mobile technology and network providers • access mobile network services	• Mobile communications - 2G, 3G, 4G	• Discussing types of mobile technology and the benefits of using mobile network services • Making voice or video calls on mobile networks • Sending and receiving data on mobile networks • Conducting educational tours to mobile service providers	• Expert guest presentations • ICT Tools such as smart phones
	• identify different types of internet services • access internet services	• Internet Services - e-Banking - e-Commerce - e-Registration - e-Learning - e-Marking - e-Governance	• Discussing how different internet services operate • Demonstrating how to access different internet services	• Internet • ICT Tools

8.0 ASSESSMENT

The syllabus' scheme of assessment is grounded on the principle of inclusivity. Arrangements, accommodations and modifications must be visible in both continuous and summative assessments to enable candidates with special needs to access assessment.

8.1 ASSESSMENT OBJECTIVES

8.1.1 Knowledge and Understanding

Learners should be able to:

- identify ICT tools in the environment
- recognise information in a variety of forms
- communicate using ICT tools
- incorporate ICT into other subjects
- present information in a variety of forms
- archive cultural information using ICT
- recognize professionals in ICT

8.1.2 Problem solving

Learners should be able to:

- create a computer project from a given problem statement
- give commands to control a device using ICT
- present information in a variety of forms
- design data flow diagrams

8.1.3 Practical Skills

Learners should be able to:

- select and apply appropriate techniques and principles to develop presentations
- design and develop solutions to given problem
- create a computer project from a given problem statement
- diagnose faults and repair ICT tools
- updating and using anti – virus software

8.2 SCHEME OF ASSESSMENT

The ICT Syllabus embraces both continuous assessment and summative examinations.

Continuous Assessment (55%)

Profiling, tests, and practical assignments are administered and collated from Infant through to Grade 7. Projects through research and designs start at Grade 5. All the marks contribute to the final mark.

Summative Assessment (45%)

The summative assessment comprises two components as follows:

Paper 1

1 hour 30 minutes – (40 marks) 20%

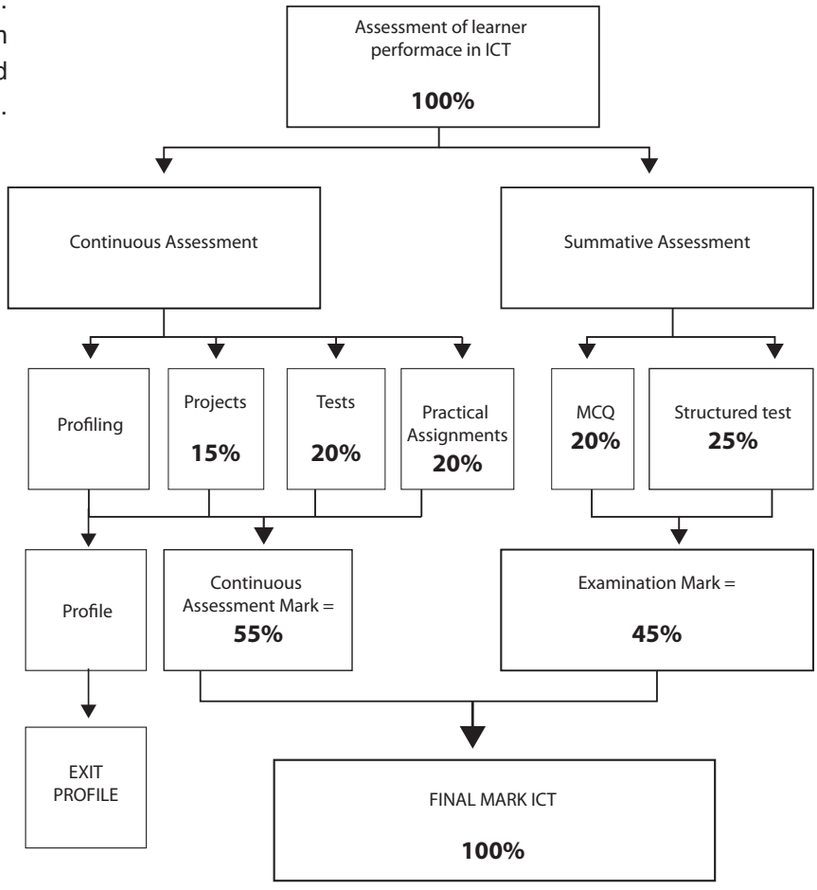
There are 40 multiple choice questions and candidates are required to answer all.

Paper 2

1 hour 30 minutes – (40 marks)25%

Paper 2 comprises of Section A and B. Section A with approximately 25 questions is compulsory and carries 25 marks. Section B is a choice Section which carries 15 marks. A candidate is expected to choose 3 questions out of 5 questions. Each question carries 5 marks.

Model of Assessment



There are three papers as shown in the table below.

PAPER	DESCRIPTION	DURATION	MARKS	WEIGHTING %
1	Multiple Choice Questions	1½ hours	40	20
2	Structured Questions	1½ hours	40	25
3	Continuous Assessment		100	55
TOTAL				100

SKILLS WEIGHTING GRID

PAPER	KNOWLEDGE AND UNDERSTANDING (%)	APPLICATION (%)	PROBLEM SOLVING (%)	PRACTICAL SKILLS(%)	TOTAL
1	30	40	30	-	100
2	35	40	25	-	100
3	10	20	20	50	100

8.3 SPECIFICATION GRIDS

PAPER 1

	Topic	Weighting (%)
1	ICT tools	5
2	Creating and Publishing	10
3	Computer software	10
4	Safety and Security	5
5	The world wide web and collaboration online	10
6	Enterprise using ICT	10
7	Communication and networks	10
8	Programming	15
9	Application software	15
TOTAL		100

PAPER 2 STRUCTURED TEST

	Topic	Weighting (%)
1	ICT tools	5
2	Creating and Publishing	10
3	Computer software	10
4	Safety and Security	5
5	The world wide web and collaboration online	10
6	ICT Enterprise	10
7	Communication and networks	10
8	Programming	15
9	Application software	15
TOTAL		100

PAPER 3 PRACTICAL ASSESSMENT

TOPIC	Weighting(%)
Application software	30
Creating and Publishing	40
Multimedia	10
World wide Web and Online Collaboration	10
Programming	10
TOTAL	**100**

JUNIOR INFORMATION AND COMMUNICATION TECHNOLOGY PROFILE CHECKLIST

Key: 5.

5. Excellent **4. Very Good** **3. Good** **2. Satisfactory** **1. Needs Help**

Please Tick one Appropriate Box

	1	2	3	4	5	DATES	COMMENTS
GRADE 3							
ICT TOOLS							
Can identify different types of computers							
Can operate any type of computer							
CREATING AND PUBLISHING							
Can create a graph							
Can interpret a graph							
Can capture images							
Can transfer image from source to other devices							
Can add images and sound to a presentation							
Can classify data							
COMPUTER SOFTWARE							
Can interact with computer embedded systems							
Ability to create a word processing document							
Editing a word processing document							
Formatting a word processing document							
Saving a document							
Can identify different storage devices							
Can retrieve information from storage devices							
Combining text, images and sound to create multimedia presentations							
Can record audio							
Ability to compose music using musical software							

	1	2	3	4	5	DATES	COMMENTS
SAFETY AND SECURITY							
Can create a password							
Can remove passwords							
Can change passwords							
THE WORLD WIDE WEB AND ONLINE COLLABORATION							
Ability to navigate a web page							
Can use different search engines							
Can navigate within a web page to find information							
Can find information using search engines							
Ability to send electronic messages							
ICT ENPTREPRISE							
Identifying professionals in ICT							
PROGRAMMING							
Programming proficiency							
GRADE 4							
ICT TOOLS							
Can use peripheral devices							
Can connect peripheral devices							
CREATING AND PUBLISHING							
Preparing PowerPoint presentations							
Ability to analyse data from given tables							
COMPUTER SOFTWARE							
Ability to design cards							
Transferring files between storage devices							
Incorporation of text, images and sound to a presentation							
Ability to use audio recording software							
SAFETY AND SECURITY							
Scanning and removing computer viruses							
THE WORLD WIDE WEB AND ONLINE COLLABORATION							
Ability to create bookmarks to frequently visited sites							
Ability to use search tools							
Ability to send electronic messages with attachments							
Download messages with attachments							
ICT ENPTREPRISE							
Identifying professionals in ICT							

	1	2	3	4	5	DATES	COMMENTS
PROGRAMMING							
Programming proficiency							
GRADE 5							
ICT TOOLS							
Identifying faults in ICT tools							
Resolving faults in ICT tools							
CREATING AND PUBLISHING							
Creating a database table							
Manipulating records in a table							
COMPUTER SOFTWARE							
Exchanging educational materials online							
Composing and recording music using musical software							
Producing multimedia presentations							
SAFETY AND SECURITY							
Showing Unhu/ Ubuntu/ Vumunhu when online							
THE WORLD WIDE WEB AND ONLINE COLLABORATION							
Searching educational information from the internet.							
Online collaboration with peers to produce work on a common subject							
Creating e-mail account							
Operating an e-mail account							
ICT ENPTREPRISE							
Identifying professionals in ICT							
PROGRAMMING							
Programming proficiency							
COMMUNICATION AND NETWORKS							
Ability to connect a device to a wired network							
Distinguishing network types							
Illustrate network topologies							
Setting up a peer to peer connection							
GRADE 6							
ICT TOOLS							
Ability to utilize utility software applications							
CREATING AND PUBLISHING							
Presenting forms and reports							
Arranging records using a set criteria							

	1	2	3	4	5	DATES	COMMENTS
COMPUTER SOFTWARE							
Perform mathematical calculations on spreadsheet data							
Creating charts using spreadsheets data							
Sorting data							
Ability to install and uninstall software							
Saving and retrieving files to and from a cloud							
Creating 2D and 3D images							
Manipulating 2D and 3D images							
Recording educational video							
SAFETY AND SECURITY							
Demonstrating ways of curbing hacking.							
THE WORLD WIDE WEB AND ONLINE COLLABORATION							
Navigating a web page							
Designing a web page using a template							
Managing mailbox							
ICT ENPTREPRISE							
Identifying professionals in ICT							
PROGRAMMING							
Proficiency in creating non-gaming software							
COMMUNICATION AND NETWORKS							
Ability to connect to a wireless network							
Transferring files via wired and wireless networks							
Creating network topology models							
Sharing resources on a network							
GRADE 7							
ICT TOOLS							
Diagnosing and fixing faults in ICT tools							
Assembling and disassembling ICT tools							
CREATING AND PUBLISHING							
Creating queries using the design wizard							
Creating reports using the design wizard							
COMPUTER SOFTWARE							
Ability to alter images							
Cropping and editing images							
Creating and Editing video clips							
SAFETY AND SECURITY							
Installing and updating antivirus programs							
Configuring firewalls							
Awareness of data protection laws							
THE WORLD WIDE WEB AND ONLINE COLLABORATION							
Uploading text, images and videos to a website							

	1	2	3	4	5	DATES	COMMENTS
ICT ENPTREPRISE							
Outlining roles of ICT professionals							
PROGRAMMING							
Programming proficiency							
COMMUNICATION AND NETWORKS							
Produce and test a network cable							
Create a peer to peer network							
Ability to use mobile devices							
Interaction with internet services							

9.0 APPENDICES

APPENDIX I: GLOSSARY OF TERMS USED IN QUESTION PAPERS

It is hoped that the glossary will be helpful to learners as a guide. The glossary has been deliberately kept brief not only with respect to the number of terms included but also to the descriptions of their meanings. Learners should appreciate that the meaning of a term must depend in part on its context.

1. Define	is intended literally, only a formal statement or equivalent paraphrases being required.
2. State	implies a concise answer with little or no supporting argument e.g. numerical answer that can readily be obtained by inspection
3. List	requires a number of points generally each of one word with no elaboration, where a number of points is specified this should not be exceeded.
4. Explain	may imply reasoning or some reference to theory depending on the context
5. Describe	requires the candidate to state in words (using diagrams where appropriate) the main points of the concept
6. Outline	implies brevity that is restricting the answer to given essentials
7. Predict/deduce	the candidate is expected to produce the expected answer by making a logical connection between other pieces of information
8. Suggest	it is used in two main contexts that is either to imply that there is no unique answer or to imply that learners are expected to apply their general knowledge
9. Find	is a general term that may variously be interpreted as calculate, measure, determine etc
10. Determine	often implies that the quantity concerned cannot be measured directly but is obtained by calculation

APPENDIX II: ACRONYMS

2D	2 Dimensional
3D	3 Dimensional
2G	Second Generation
3G	Third Generation
4G	Fourth Generation
ATM	Automated Teller Machine
CDs	Compact Disks
CCTV	Closed Circuit Television
CPU	Central Processing Unit
DVDs	Digital Versatile Disks
GUI	Graphical User Interface
ICT	Information and Communication Technology

Internet	International Network
LAN	Local Area Network
MAN	Metropolitan Area Network
PA	Public Address System
PAN	Personal Area Network
URL	Uniform Resource Locator
VDU	Visual Display Unit
VVoIP	Video and Voice over Internet Protocol
WAN	Wide Area Network
WIMP	Windows Icons Menus Pointer
WLAN	Wireless Local Area Network
WWW	World Wide Web