



# **Information and Communication Technology**

## **Grade 7 (2021) Essential Contents**

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## Information & Communication Technology

### Grade 7 (2021)

#### Essential Contents (Grade 6 & 7)

Competency	Competency level	Content	Learning outcomes	Duration/ Periods
1. Identifies the organization of the Computer	1.1 Identifies the components of a computer	<ul style="list-style-type: none"> <li>● Basic components of computer :                             <ul style="list-style-type: none"> <li>○ Hardware : input, output, processing, storage</li> <li>○ Software</li> </ul> </li> <li>● Components of CPU</li> </ul>	<ul style="list-style-type: none"> <li>● Identifies and lists the components of a computer</li> <li>● Explains functions of Arithmetic and Logical Unit (ALU) and Control Unit (CU)</li> </ul>	02
2. Explores the functions of Operating systems	2.1 Describes the different types of operating systems	<ul style="list-style-type: none"> <li>● Windows, Mac OS, Linux, Android, mobile OSs</li> </ul>	<ul style="list-style-type: none"> <li>● Lists various operating systems</li> <li>● Identifies operating systems in various devices</li> </ul>	01
	2.3 Creates folders Save/open/edit/delete/ rename/ copy/move/ files	<ul style="list-style-type: none"> <li>● Manipulation of Folders and Files</li> <li>● Copy and move files from one storage unit to another</li> </ul>	<ul style="list-style-type: none"> <li>● Saves and opens files in folders</li> <li>● Organizes files as per purposes</li> <li>● List out properties of file</li> </ul>	01
3. Uses various Safety precautions in a computer laboratory	3.1 Uses various precautionary methods to protect physical and software components of a computer	<ul style="list-style-type: none"> <li>● Surge protection and protection against voltage drops (Fuses and UPS)</li> <li>● Protection against physical damage (dust, humidity, insects etc.)</li> <li>● Use of Anti-virus and other measures against malware.</li> <li>● Good practices in the lab</li> </ul>	<ul style="list-style-type: none"> <li>● Identifies hardware and software security issues.</li> <li>● Takes precautions to minimize risk to hardware and software components</li> <li>● Follows the good practices in the lab</li> </ul>	02

4. Uses application software to type effectively	4.1 Uses computers efficiently by using mouse and keyboard effectively	<ul style="list-style-type: none"> <li>● Use of drawing software to use the mouse properly</li> <li>● Use of text editing software to develop keyboard skills</li> </ul>	<ul style="list-style-type: none"> <li>● Uses mouse and keyboard effectively</li> <li>● Demonstrates skills in the English keyboard</li> <li>● Demonstrates skills in the Sinhala/Tamil keyboards</li> </ul>	02
	4.2 Uses audio software and video software effectively	<ul style="list-style-type: none"> <li>● Use of audio software to create an audio clip</li> <li>● Use of video software to create a video clip</li> </ul>	<ul style="list-style-type: none"> <li>● Creates a simple audio file</li> <li>● Creates a simple video file</li> </ul>	02
5. Uses programming language to develop simple programs (Using Scratch)	5.1 Draws flowcharts to explain a process	<ul style="list-style-type: none"> <li>● Introduction to flowchart symbols <ul style="list-style-type: none"> <li>○ Start/Stop</li> <li>○ Input/ Output</li> <li>○ Process</li> </ul> </li> <li>● Flowcharts to explain the simple sequential processes of day to day tasks</li> </ul>	<ul style="list-style-type: none"> <li>● Identifies flowchart symbols</li> <li>● Represents a process with a flowchart.</li> </ul>	03
	5.2 Analyzes simple problems by decomposing and connecting them logically	<ul style="list-style-type: none"> <li>● Use of flow charts. <ul style="list-style-type: none"> <li>○ Sequence</li> <li>○ Selection (Concept of Selection)</li> <li>○ Iteration (Concept of Iteration)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrates critical and analytical thinking techniques</li> <li>● Describes sequence in flowcharts</li> <li>● Demonstrates the use of sequence in flowcharts appropriately</li> </ul>	
	5.3 Develops simple programs using visual development environment (Using Scratch)	<ul style="list-style-type: none"> <li>● Introduction to Interactive Development Environment – (IDE) to develop computer programs</li> <li>● Developing simple programs (sequence type) using visual</li> </ul>	<ul style="list-style-type: none"> <li>● Uses Scratch programming IDE</li> <li>● Applies basic instructions sequentially to develop simple programs</li> </ul>	03

		supports of programming language (using an Interface specially designed to teach programming to children)		
	5.4 Describe the concept of variables in programs	<ul style="list-style-type: none"> <li>● Definition of variable</li> <li>● Use of variables in programs</li> </ul>	<ul style="list-style-type: none"> <li>● Describes the use of variables in a program</li> <li>● Writes programs with variables appropriately</li> </ul>	
6 Uses Presentation software to create presentation	6.1 Uses basic functions of Presentation software in creating a presentation	<ul style="list-style-type: none"> <li>● Create, open, save and close a presentation</li> <li>● Add Slide</li> <li>● Inserting files/objects (text, picture, shapes, clip art, word art etc.)</li> <li>● Formatting of Slide</li> <li>● Slide transitions</li> </ul>	<ul style="list-style-type: none"> <li>● Creates presentation using presentation software</li> </ul>	02
7. Uses the services of the Internet and develops web pages	7.1 Uses resources available in the Internet securely and ethically	<ul style="list-style-type: none"> <li>● WWW, URL</li> <li>● Search Engines</li> <li>● Download images, audio, video etc.</li> <li>● Web based free Email <ul style="list-style-type: none"> <li>○ Creation of an account</li> <li>○ Use of e-mail: Subject, To, Bcc, Cc, Attachments, Forward,</li> </ul> </li> <li>● Online conferencing</li> <li>● Protection against unauthorized access and malware <ul style="list-style-type: none"> <li>○ Hacking</li> <li>○ Virus attacks</li> <li>○ Software piracy</li> <li>○ Access Control</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Uses Internet for information gathering</li> <li>● Communicates via e-mails</li> <li>● Communicates via online conferencing</li> <li>● Follows safety and security procedures</li> </ul>	02
<b>Total</b>				<b>20</b>

### Low Prioritized Contents of Grade 7

Competency	Competency Level	Content	Remarks
1. Identifies the organization of the Computer	1.2 Describes the evolution of computers	<ul style="list-style-type: none"> <li>● Brief history of Processor element (vacuum Tube, transistor, IC etc.) : clock Speed, size, heat, power consumption, cost etc.</li> </ul>	Could be completed in the first term
2. Explores the functions of Operating systems	2.2 Identifies computer storage as a collection of digital data on different media	<ul style="list-style-type: none"> <li>● Hard drive, Flash Drive, CD, DVD</li> </ul>	This section can be completed with Grade 9 competency 1
	2.4 Explores file properties	<ul style="list-style-type: none"> <li>● Identification of size, type, modified date</li> </ul>	This section can be completed with Grade 8 competency 2
5. Uses programming language to develop simple programs (Using Scratch)	5.4 Identifies the concept of errors in a program as bugs	<ul style="list-style-type: none"> <li>● Conversion of an erroneous program to an error free programs and observation of the output</li> </ul>	This section can be completed with Grade 8 competency 4
7. Uses the services of the Internet and develops web pages	7.3 Develops web pages using HTML	<ul style="list-style-type: none"> <li>● Creation of a web page using text, images                             <ul style="list-style-type: none"> <li>○ Text formatting</li> <li>○ Colors</li> <li>○ Lists</li> </ul> </li> <li>● Creating links to the other pages &amp; web sites</li> </ul>	This section can be completed with Grade 8 competency 6