Information and Communication Technology

Workbook Grade 7

Educational Publications Department



To obtain electronic textbooks, visit **www.edupub.gov.lk**

First Print-2018Second Print-2019

All Rights Reserved ISBN 978-955-25-0116-6

Published by	:	The Educational Publications Department
Printed by	:	Printed by Napco (Pvt) Ltd. No. 17, Makola Road, Pathima Mawatha, Kiribathgoda.

The National Anthem of Sri Lanka

Sri Lanka Matha

Apa Sri Lanka Namo Namo Namo Matha Sundara siri barinee, surendi athi sobamana Lanka Dhanya dhanaya neka mal palaturu piri jaya bhoomiya ramya Apa hata sepa siri setha sadana jeewanaye matha Piliganu mena apa bhakthi pooja Namo Namo Matha Apa Sri Lanka Namo Namo Namo Matha Oba we apa vidya Obamaya apa sathya Oba we apa shakthi Apa hada thula bhakthi Oba apa aloke Apage anuprane Oba apa jeevana we Apa mukthiya oba we Nava jeevana demine, nithina apa pubudukaran matha Gnana veerya vadawamina regena yanu mana jaya bhoomi kara Eka mavakage daru kela bevina Yamu yamu vee nopama Prema vada sema bheda durerada Namo, Namo Matha Apa Sri Lanka Namo Namo Namo Matha

අපි වෙමු එක මවකගෙ දරුවෝ එක නිවසෙහි වෙසෙනා එක පාටැති එක රුධිරය වේ අප කය තුළ දුවනා

එබැවිනි අපි වෙමු සොයුරු සොයුරියෝ එක ලෙස එහි වැඩෙනා ජීවත් වන අප මෙම නිවසේ සොඳින සිටිය යුතු වේ

සැමට ම මෙත් කරුණා ගුණෙනී වෙළී සමගි දමිනී රත් මිණි මුතු නො ව එය ම ය සැපතා කිසි කල නොම දිරනා

ආතන්ද සමරකෝන

ஒரு தாய் மக்கள் நாமாவோம ஒன்றே நாம் வாழும் இல்லம் நன்றே உடலில் ஓடும் ஒன்றே நம் குருதி நிறம்

அதனால் சகோதரர் நாமாவோம் ஒன்றாய் வாழும் வளரும் நாம் நன்றாய் இவ் இல்லினிலே நலமே வாழ்தல் வேண்டுமன்றோ

யாவரும் அன்பு கருணையுடன் ஒற்றுமை சிறக்க வாழ்ந்திடுதல் பொன்னும் மணியும் முத்துமல்ல - அதுவே யான்று மழியாச் செல்வமன்றோ.

ஆனந்த சமரக்கோன் கவிதையின் பெயர்ப்பு.



Being innovative, changing with right knowledge Be a light to the country as well as to the world.

Message from the Hon. Minister of Education

The past two decades have been significant in the world history due to changes that took place in technology. The present students face a lot of new challenges along with the rapid development of Information Technology, communication and other related fields. The manner of career opportunities are liable to change specifically in the near future. In such an environment, with a new technological and intellectual society, thousands of innovative career opportunities would be created. To win those challenges, it is the responsibility of the Sri Lankan Government and myself, as the Minister of Education, to empower you all.

This book is a product of free education. Your aim must be to use this book properly and acquire the necessary knowledge out of it. The government in turn is able to provide free textbooks to you, as a result of the commitment and labour of your parents and elders.

Since we have understood that the education is crucial in deciding the future of a country, the government has taken steps to change curriculum to suit the rapid changes of the technological world. Hence, you have to dedicate yourselves to become productive citizens. I believe that the knowledge this book provides will suffice your aim.

It is your duty to give a proper value to the money spent by the government on your education. Also you should understand that education determines your future. Make sure that you reach the optimum social stratum through education.

I congratulate you to enjoy the benefits of free education and bloom as an honoured citizen who takes the name of Sri Lanka to the world.

Akila Viraj Kariyawasam Minister of Education

Foreword

The educational objectives of the contemporary world are becoming more complex along with the economic, social, cultural and technological development. The learning and teaching process too is changing in relation to human experiences, technological differences, research and new indices. Therefore, it is required to produce the textbook by including subject related information according to the objectives in the syllabus in order to maintain the teaching process by organizing learning experiences that suit to the learner needs. The textbook is not merely a learning tool for the learner. It is a blessing that contributes to obtain a higher education along with a development of conduct and attitudes, to develop values and to obtain learning experiences.

The government in its realization of the concept of free education has offered you all the textbooks from grades 1-11. I would like to remind you that you should make the maximum use of these textbooks and protect them well. I sincerely hope that this textbook would assist you to obtain the expertise to become a virtuous citizen with a complete personality who would be a valuable asset to the country.

I would like to bestow my sincere thanks on the members of the editorial and writer boards as well as on the staff of the Educational Publications Department who have strived to offer this textbook to you.

W. M. Jayantha Wickramanayaka,

Commissioner General of Educational Publications, Educational Publications Department, Isurupaya, Battaramulla. 2019.04.10

Monitoring and Supervision W. M. Jayantha Wickramanayaka Direction W.A. Nirmala Piyaseeli Co-ordination H.A.I.P. Upathissa	 Commissioner General of Educational Publications Educational Publications Department Commissioner of Education Publications (Development) Educational Publications Department Assistant Commissioner Educational Publications Department 		
Board of Editors			
Dr. Prasad Wimalarathna	 Head, Faculty of Communication & Media Technology University of Colombo School of Computing 		
Dr. V.G.N. Vidanagama	 Senior Lecturer, University of Wayamba 		
Dr. Senaka Amarakeerthi	 Senior Lecturer, University of Sri Jayawardenapura 		
W.W.M.D.C.B. Piyasiri	 Instructor, Technical College, Hasalaka 		
Dr. K. Thabotharan	 Senior Lecture Faculty of Communication & Media Technology / University of Jaffna 		
H.A.I.P. Upathissa	 Assistant Commissioner Educational Publications Department 		
E.N. Boralugoda	 Assistant Commissioner Educational Publications Department 		
Board of Writers			
Oshani Rodrigo	 Teacher, Chi/ Madagama Abhaya Maha Vidyalaya Panirendawa 		
A. Sunil Samaraweera	 Center Manager Zonal Computer Resource Center Kegalle 		
L.G.I. Priyadarshani	 Teacher CP/ Vidyartha Vidyalaya Kandy 		

vii

V.A. Kodithuwakku	- Teacher
	Zonal Education Office
	Gampaha
S.M.D.T. Sinhabahu	- Teacher
	CH/St. Sebesthiyan M.M. Vidyalaya
	Katuneriya
J.A.A. Chinthaka Jayakodi	- Teacher
	Ke/Mawa/Parakrama Maha Vidyalaya
	Katuneriya
N. Vagisamurthi	- Director of Education
	(Retired)
T. Mathiwadanan	- In Service Advicer
	Zonal Education Office
	Piliyandala
M.T. Mohammad Ilham	- Teacher
	Sahira Collage
	Colombo
H.L. Surjudeen	- Deputy Principal
	Ameena Girl's College
	Matale
H.A.I.P. Upathissa	- Assistant Commissioner
	Educational Publications Department
	-
Language Editing	
D.R.N.K. Gamage	- Assistant Commissioner
	Department of Examination
W. Indumini Darshika	- Assistant Commissioner
	Educational Publications Department
Cover Page	Educational Fusilitations Department
Chaminda Hapuarachchi	- Computer Assistant
	Educational Publications Department
	Educational Fusilitations Department
Technical Assistance	
Chaminda Hapuarachchi	- Computer Assistant
	Educational Publications Department

Content







	7		
•			
	•••••	•	
•			
	•••••	•	
	•••••		
	•••••	•	
	•••••		
 02. Consider the following sentences Put tick " ✓ " for correct sea and cross " ×" for incorrect sentences. 			
(i) Central processing unit holds all the Information, that using in memory registers.	is cu ()	
(ii) Operating system is a main part of central processing unit.	()	
(iii) Central processing unit is running on the background when ever any task is performed by the computer.	()	
(iv) Clock speed is measured in hertz	()	
(v) Control unit is a part of central processing unit	()	
(vi) Central processing unit is a digital ciruit	()	
(vii) Control unit performs arithmetic operations	()	
(viii) Central processing unit is located on the computer mother board	()	











Activity 1.3

01. Complete the following table related to evolution of the central processing unit

	Technology used	Electricity Consumption	Unit which measures processing speed
First Generation	Vacuum tube		
Second			
Generation			
Third			
Generation			
Fourth			
Generation			

02. Name the technology used to construct the central processing unit for following computers















Computer screen of the Ubuntu operating stystem



Computer screen of the iOS operating system







Computer screen of the Blackberry operating system



Computer screen of the Fedora operating system





Computer screen of the Windows operating system



Computer screen of the Mac operating system





Computer screen of the Android operating system



Activity 2.2			
01. What are computer storag	ge devices?		
02. What are the things that c (List five examples)	an be stored in com	puter storage device?	
•			
•			
03. • Magnetic Media De• Optical Media Devi			
• Solid State Media D			
are the three categories of Above categorization is b			
04. Consider the following s hard disk external hard disk magnetic tape	torage devices. CD DVD zip		
Correctly insert the abov	-	ving table.	
Magnetic media devices	Optical media devices	Solid state media devices	
		Free distribution or	nly 🥑







(10)



01. Consider the following files and write them under the suitable folder to store.

Term test mark list of students in a class Video of the school drama which participated in all island drama competition Agenda of the sportmeet National anthem Picture of the sport meet





UB Securi	ty of the Comp	outer Syster	n
Activity 3.1			
	1 0		
01. What are Computer Hard	dware?		
02. Write ten examples for C	Computer Hardware.		
i	vi		
ii	vii		
ii	viii		

Externally visible hardware	Hardware inside the system unit



0				
	Activity 3.2			
	01. Briefly describe th hardware is threate	nree instances when the second .	curity of the computer	
	A			
	С			









02. Write two procedures that can be followed to be secured from each threat mentioned above

Threat	Protection method
А.	
В.	
С.	







Free distribution only

	Activity 3.4			
	01. What is Malware?			
	02. List three examples for 1	Malware and briefly desc	cribe them.	
	•			
				P
	•			
	•			
- 1	03. Write five issues created	l in the computer by maly		
_	•			
_				
	•			

16 Free distribution only

-











-
-
-
-
-





	Activity 3.5		
01.	What is a backup copy?		
02.	List three advantages of k	keeping backup copies.	
	•		
	•		 J
	•		
03.	What you mean by access	s control?	



04. Why an access control should be done?	
 05. Write the main two methods used in access control and briefly explain them. • 	J
•	























01. List the advantages of using the keyboard appropriately.

-
-
-
-

02. Write five steps to be followed when using the keyboard correctly

-
-
-
-
-





	Activity 4.6			
	01. Write the importanc	e of using a software for touc	ch typing	
	02. Write five software (Get the help from	s used for touch typing. your teacher)		
	•			
	•			
	•			
	03. Create a model of a	keyboard and practice the to	uch typing	
	your teacher in the	of keys are typed within a re- e computer lab or using the actice this as a game with yo	model of the keyboard	
	04. Practice following s	entences by touch typing		
	i. I am in Grade Se ii. This is my new B iii. We will play Bas	Book ketball		
	iv. I come to school v. How's the weather			
0-			Free distribution only 23	






in question 03 and 06 using (Get help from your teacher)













ſ			0	
		-		
L	2	_		
L				
ь				

(ii) Write suitable algorithm in order to switch on the computer system according to the diagram given below.





















Activity 5.4

01. Fill in the circle using the statements given from A to J according to the related instruction given below.





(33)









Г		0	
н			
н			
н	_	-	
		-	
н			

02. Fill in the blank using only the given words in the brackets.

- (i) Instruction are to develop a scratch programme (used/ not used)
- (ii) Instructions be connected to each other in order to develop a programme (can/ cannot)
- (iii) Variables are to store a values in a programme (used/ not used)
- (iv) Scratch programme be downloaded from internet for free of charge (can/ cannot)
- (v) control structure decides the flow direction according to the decision (Sequence/ Selection)
- (vi) Sequence control structure programme instructions are executed given order (in / not in)







Activity 5.6		

01. Complete the following set of instructions and connect three variables (Num1, Num2, Sum) to each other using the arrows in order to calculate the total of two numbers

-										
when	clicked									
T										
1 C .										
1.0										
Enter t	he first vaalue		d wai							
SK Enter t	ne mst vaalue	s and	u wai	L						
🔺 🔬 🛛										
A 81	- A - A - 17 F									
1.00										
et Num1	💌 to 👘		answ	er						
*										
i										
sk Enter f	he second va	- 1			1.					
SK Enter I	ne second va	alue	and	Wall						
T			_							
1.00										
et Num2		10 A	answ							
et Num2	💌 to 🔤		answ	e						
Ŧ										
		177				٦.				
			_			_			_	
et Sum	🔻 to				. (Nu	m1		lum:	2
-			¥ .				1		 4	
- T									 	
i pri	100 C			577			٦.			
				V			_			
say	join	-	_	_			um			

02. Similar to the above, develop a programme to divide one number from the other.

when 🏓 clicked
ask Enter the first vaalue and wait
set Num1 v to answer
ask Enter the second vaalue and wait
set Num2 to answer
set Div to Num1 / Num2
say join Answer is Div





Let's create a presentation

Let's learn how to use Microsoft Office PowerPoint software create a presentation. Now blank presentation can be opened using 'blank presentation'. The, below shown interface will appear

Step

 $Start \rightarrow All \ Programs \rightarrow Microsoft \ Office \rightarrow Microsoft \ Office \ PowerPoint$











When a new presentation is opened, topic slide would appear as shown in figure 5.2. Here include a topic for the presentation you are going to prepare















Adding a New Slides to a presentation

To add new slide to a presentation, following steps should be followed. Here several types of slides appear as shown below. By selecting the slide according to the need, you have to click on the selected slide.

Steps to add New Slides

Home \rightarrow New Slide

10000	- J 👿 =						0.0	
File	Home Insert Desigr	n Transitions Ani	mations Slide Sho	w Review	View Help Nitro F	ro9 ♀ Tell me	Pt s⊧	hare
Paste	Silde .	- 60 I <u>U</u> \$ abc AV - Aa - A [*] A [*]	 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓		Shapes Arrange Quid Style Drawing	5 - 60		
lipboard	Uffice Theme	[]		n ort	Drawing	G()		
` 	Title Slide	Title and Content	Section Header	o ad	d title			
	Two content	companson	The Only					
		[······	[< to add sub	otitle			
		888	3					
	Blank	Content with Caption	Picture with Caption					
	Blank	Content with Caption	Picture with					
		Content with Caption ected Slides	Picture with					

Figure 6.3 – New slide dialog box

Select the 'blank' if you can need a blank slide, 'title and content' if you can nee to present facts with a title or 'title slide', if you want a slide to include a title.











Inserting a Clip Art and Word Art to slides

To add title to a presentation click on the Click to add title place holder box, then type the text

To add sub title to a presentation click on the Click to add sub title place holder box then type the text

To add description in details click on the Click to add text area and type the text

Click to add title

Click to add subtitle

Figure 6.4 – Add Title

Click to add text	

Figure 6.5 – Add Title and Sub Title













To insert shapes/ objects, clip art or pictures, you should use insert bar The insert ribbon can be used to add shape/ object, Clip Art, Picture into presentation



Figure 6.6 – Insert bar

Insert bar will appear as in above figure. (Figure 6.6) Through 'pictures' pictures can insert Picture can insert by using 'picture' option Shape can be inserted by using 'shapes' option By using Word Art Text can be decorated Also we can use to add multimedia Video can insert by using 'video' option Audio can insert by using 'Audio' option











Insert a Table

Follow the steps given below to insert a table

Select 'Insert' then select 'table' after than The insert table dialog box will appear on the screen. Now specify the required number of rows and columns and click ok

	∙ অূ ে • ৫	
File	Home Insert Design Transitions	Insert Table ? ×
New Slide + Slides 1	Table Pictures Online Screenshot Photo Pictures Online Screenshot Photo Album* Insert Table Insert Table Insert Table Insert Table Insert Table Insert Table Insert Table	Table size Number of columns: S Number of rows: 2 AutoFit behavior Image: Size of the state of

Figure 6.7 – Insert a

Table













Formatting Text on Slides

As shown in the figure 6.8, the text formatting tools are in 'home' menu

FMAbhay	a 🔻 12	• A A A Aa •	%
BI	Į → ab∈ X ₂	x² 🛕 - 🏰 -	<u>A</u> -
	Fo	nt	Fa

Figure 6.8 - Text Formatting tools

Steps for change the font type

- 1. Select text
- 2. Select 'font face' by clicking on the arrow below the font face

Steps for change the font size

- 1. Select text
- 2. Clicking on the arrow which is in near to font size change the font size

Steps for change the font color

- 1. Select text
- 2. Click on the arrow which is here to font color cage then select a color

Slide Transition

With choosing a suitable effect from 'transition to this side' of transition bar you can create an attractive slide.

Open, store, close a presentation

If you want to open a presentation which is already created If you want to open a presentation which is already created you have to go to the 'file' menu. Then you can see a window as shown in figure 6.9

To pen an existing presentation you can use 'browse' to go to the place where the presentation is saved.







Figure 6.9 – File menu

For closer store current presentation, follow the below given instruction

Steps to store a presentation file \rightarrow save

Steps to store a presentation file \rightarrow close

Libre office Impress software

When open Libre office Impress software open a windows as shown above. With this software, we can create a presentation as above.







Complete the following activity

- 1st slide Name the presentation as "Solar System"
- 2nd Slide Insert picture of sun and write down two sentences about sun.
- 3rd Slide Insert a table and write down detail description of other planet is inside table



S.	SUN		
	CURY	Other P	lanets
	7ENUS ARTH	ගුහ වස්තුව	එක් භුමණයකට ගතවන කාලය
\ ``////////	MARS QC		දින 88
UI (PITER සිකු	j07	දින 225
SA SA	TURN	විය	දින 365
		හරු	දින 687
	බහ බුහ	ස්පති	අවුරුදු 12
NEF	GC:	නසුරු	අවුරුදු 29
		ර්නස්	ఇల్లర్వా 84
	THER OT	පේචූන්	අවුරුදු 165
	ಶ್ವ	ටෝ	අවුරුදු 247



(45







Use a design template

A design template help you to decide on a design for your presentation Ms power point given you the option to select a design templates that the presentation's design but doesn't include content the design template contains elements such as color schemes. Background and fours. The steps to creating a presentation are as follows

 $Design \rightarrow select design$





This Presentation Aa Aa Office Aa Aa	Aa
Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa	_
office Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa	_
	_
	_
	Aa
	and the second se
Aa Aa Aa Aa Aa Aa Aa Aa	
	Aa
Aa Aa Aa Aa	Aa
Enable Content Updates from Office.com	

Figure 6.11













Formatting the slides

(a) Moving a Slide

Slide can be moved from one place to another place

- (i) Select slide \rightarrow drag and drop
- (ii) Select slide \rightarrow right mouse click \rightarrow cut \rightarrow select the new place \rightarrow right mouse \rightarrow click paste
- (b) Copying a Slide
 Select slide → right mouse click → copy → select the new place → right mouse → click paste
- (c) Hiding a slide
 Select slide → hide slide (with right click the mouse)
- (d) Deleting a slide

Select slide using left mouse button \rightarrow press delete button in the keyboard or select slide \rightarrow right click the mouse select 'cut'















Finally the slides should be appearing as below. Then do the presentation in the class











Use of Internet for Information and Communication

Activity 7.1

Select the correct answer

- (1) What is the activity that cannot do by using the Internet
 - (a) Send an e-mail to a friend who is in another country
 - (b) Download images of animals who lives in the sea
 - (c) Get a reply to an e-mail sent to a friend an another country
 - (d) Search details of "SARCC" countries
- (2) What is the device which does not use to access Internet?
 - (a) A computer
 - (b) Internet Service Provider
 - (c) Web browser
 - (d) Printer

(3) Who is the creator of world wide web?

- (a) Charles Babbage
- (b) Jone Von Newman
- (c) Tim berners lee
- (d) Joseph Jackword
- (4) What is ment by the abbreviation URL
 - (a) Uniform Resources Locater
 - (b) Uniform Resources Location
 - (c) United Resources Locater
 - (d) Uniform Research Locater















09. Label following web brows	ers		
		O iv	
i ii iii			
iv 10. Write two methods to identi			
•			
•	three disadvantage o	f ontline shopping	
advantages	disadv	vantage	
•	• • • • • • • • • • • • • • • • • • • •		
•			
•	•		



12. What is video conferencing?	'	
13. Write down three advantages of video conferencing?		
•		
•		
14. Write three software which is used for video conferencing	?	
•		
•		
15. Write down four services which is provided by the interne		
•		
•		



(53)

16. Three are good and be explain this with three	by using Internet. Briefly
•	
•	
•	



Activity 7.2			
01. What is e-mail?			
02. Write down three featur	res of e-mail		
•			
•	e which are use to crea		
•			
•		ng e-mail address.	
nayana@yahoo.com	-		
Password			



(55







05. Following are parts of the e-mail account match A column with B column

Α	В
1. Bcc	Can send Images
2. Cc	It is a carbon copy
3. Attachment	It is used to mention receiver's e-mail address
4. To	It is used to mention the no. of other receiver's e-mail address

06. Mention the following statements are "true" or "false"

Statements	true /false
Deleted Documents are saved inside trash It will store 20 days in this folder	
All receiving e-mail S of the particular e-mail address will be saved inside inbox	
The Documents than are already sent and not yet send will be saved inside sent	
Can Send any document through Attachment	













-			
-		- 1	
		- 1	
		_	
	ŏ.	_	
		_	

Activity 7.3

Fill in the blanks

- 01. What is the long term of HTML?
 - (a) hyper text management language
 - (b) hyper tag markup language
 - (c) hyper text markup language
 - (d) hybrid text markup language

02. The content of the web page display inside tag

- (a) <title>
- (b) <head>
- (c) <body>
- (d) <H1>

03. The tag used to inside images into the web page

- (a) <H1>
- (b)
- (c)

- (d) <image>

04. The tag used to insert a number list into the web page

- (a) <H1>
- (b)
- (c)
- (d)













- 05. The tag used to inside background color into the web page
 - (a) <background>
 - (b)
 - (c) <H2>
 - (d) <bgcolor>
- 06. Every HTML tag is should be written between the symbola
- 07. Part of a web page is given below Write down the HTML code for this



08. Create a web page to your school. Insert a image and five sentences about the school.

This is our School

My school is :-....





















	ŀ	
		•
	e	

- 06. Write down two methods of online safety
 -
 -
 - 07. What are the things which is not used as a password when creating a strong password



V.



