Information and Communication Technology

Workbook Grade **6**

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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

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ආනන්ද සමරකෝන්

ஒரு தாய மக்கள நாமாவோம ஒனறே நாம வாழும இலலம நனறே உடலில ஓடும ஒனறே நம குருதி நிறம

அதனால சகோதரா நாமாவோம ஒனறாய வாழும வளரும நாம நனறாய இவ இலலினிலே நலமே வாதல வேணடுமனறோ

யாவரும அனபு கருணையுடன ஒறறுமை சிறகக வாநதிடுதல பொனனும மணியும முததுமலல - அதுவே யானறு மழியாச செலவமனறோ.

> ஆனநத சமரககோன கவிதையின பெயாபபு.

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

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Content











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Input

Entering data into the computer is known as input and the devices which are used for that purpose are known as input device as or input methods

Process

The procedure of executing data in a computer according to the instructions is known as process

Output

Output is sending out processed data and devices used for this purpose are known as output devices or output methods

Activity 1.2

- 1. Write three examples for input devices
 - •
 - •
 - •

2. Write three examples for output devices.

- •
- •
- •









3. Identify storage devices in the picture.



4. Name the devices shown below.











5. Categorise the devices correctly and write in the following grid.

Input	Output	Other

- 6. Prepare a list of devices which can be seen in a school computer laboratory in addition to the above devices.
 -
 -
 -
 -
 -
- 7. Enter the list of the items you've prepared.

Input	Output	Other







Activity 1.3	
1. Describe a computer software.	
•	
•	
2. Which of the following is a software?	
a. Monitorb. Operating systemc. Moused. Printer	
 3. Write five examples for a computer software. • 	
•	
•	
4. What is a computer hardware?	
 5. Which of the following is an example for computer hardware? a. Monitor b. Operating system c. Web browser d. Data 	

 6. Write five examples for computer hardware. 	
•	
•	
 Write three examples for occasions where the computer is used in day to day activities. 	
•	
8. Explain two ways in which the computer can be used for agriculture?	
01	
02	

7



List the input devices and output devices that are related to the type of computer you have on the card. Then compare the results of each group and verify the accuracy with the teacher.

2. Prepare a poster on the topic of the "computer in day to day life".











In addition to the above, mention other devices that should be installed in a school computer laboratory

-
-
-
-

(2. Say if it is correct or wrong to do this following actio	ons in a
	computer laboratory by marking (\checkmark) or (\times).	
	1) Keeping the equipment in proper order after use	()
	2) Try to put your pen in to all the ports	()
	3) Playing by rotating chairs	()
	4) Inquiring about fire extinguishing equipment from th	e
	teacher	()
	5) Entering the lab after keeping water bottles and	
	removing shoes outside	()
	6) Connecting external storage drives to the computer	
	without any virus scan	()
	7) Supply electricity to the multimedia projector without	ıt
	the knowledge of teacher	()
	8) Dusting the keyboard	()

03. Set up a notice board to display safety measures you can follow in a computer laboratory. (Draw a sketch of that board in your exercise book.)

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Activity 2.2

01. Number the following pictures as **1 2 3 4** to show the sequential order of turning on a computer correctly. Write each action in words.



Now operate the computer in front of you correctly. (For that, follow the instructions given in the textbook and your teacher)

02. Write the correct sequential order of shutting down a computer.

Switching off the UPS	A
Turn off the monitor	B
Leaving from running programmes	C
Select the command of shut down	D
Turn off the wall switch	E

03. Discuss in your group about the damages caused to the computer by not shutting down the computer properly. List out some of the damages you identified.

.....





ii.	Several problems that could be caused by not working
	in the computer with a correct posture are given below.
	What measures should be taken to prevent them?

•	Pain in the eye
•	Pain along the hand from the shoulder
•	Frequent pain in backbone
•	Wrist pain
•	Difficulties in the feet



02. Write the method of managing the above waste according to the 3R system.

•••••••••••••••••••••••••••••••••••••••	••••••••••••••	••••••••••••	••••••
	••••••	••••••	•••••
••••••	•••••	•••••	•••••
••••••	•••••	•••••	•••••
		•••••	••••••



01. Have a discussion about an instance where you reused electric or electronic waste without disposing them at home. Briefly write it in your book.



02	. Write an instance where school.	you reused an elec	etronic waste in your
	•••••		
03	. Name some of the mate	-	
	at school	at home	
	•••••	••••••	
	•••••	••••••	
		•••••••	
	••••••		
	••••••	•••••••	••••••
04	. Write down names of se waste for recycling.	veral institutions th	nat collect electronic
	1		
	2		
	3		
	4		
	т		
	5		







05. Say whether the following passwords are strong or not. Put (✓) if it is strong and put (𝗙) if it is weak.

school123 Nam2005ab# claSS@21 amara abc



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(With the help of your teacher, open an operating system and identify the components of a computer screen.)







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	1.11



2. The column A contains trademarks of some operating systems. Match those trademarks with the correct name in the column B.



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	÷.	

- 2. Select a computer in your computer laboratory and write the names (with the file extension) of ten files which are stored in it.
 - i. ex : Grade6A.docx
 - ii.

 iii.

 iv.

 iv.

 v.

 vi.

 vii.

 viii.

 ix.

 x.
- 3. Fill the following grid with information of above files you have listed out in question 2.

	file name	file extension	file type	type of software	name of the software
ex:	Grade6A	docx	text file	word processing software	MS Word



-			







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		÷.		

icons	details
Select	Can start a text or a picture that is drawn
년 Crop	Can select and cut the required portion of a picture or a text
দ <mark>ি R</mark> esize	Can enlarge or reduce the picture that is drawn or text
🐴 Rotate 🔻	Can rotate the picture to a necessary direction
	Can draw a picture like drawing by a pencil
pencil	
paint basket	Can fill a closed drawing with colours conveniently.
Α	Can insert necessary text
text tool	
eraser tool	Can erase writings and drawings
	Can draw with Brushes of various Sizes
brush tool	







4. Use of different shapes



icon	details
	can be used to draw straight lines
line tool	
\sim	can be used to draw flexible lines
curve tool	

Closed images that are available in addition to the above are brown as ready-made shapes



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Getting a file

To copy and paste files and folders, select the file to be copied

Copying and pasting files and folders

1. Select a file to be copied.



2. Give the command 'copy' to be copied. Click the right mouse button for that. At the same time the short cut of Ctrl+C can be used on the keyboard.



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- 3. Select a location to be copied and give 'Paste' command. At the same time the short cut of Ctrl+V can be used on the keyboard.

)		
← → ~ ↑ 🛗 > This PC > Documents	✓ ঊ Search Documents	م		
Organize 🔻 New folder		- 🔳 🔞		
📙 Links 🗖	No items match your search.			
ConeDrive	No items match your search.			
This PC				
3D Objects				
Desktop				
Documents	View >			
Downloads	Sort by			
h Music	Group by			
Pictures	Refresh			
📕 Videos	Paste			
🏪 OS (C:)	Paste shortcut Undo Delete Ctrl+Z			
🕳 Other (D:) 🗸 🤟				
File <u>n</u> ame:	Give access to	~		
	New > Open	Cancel		
	Properties			
ji Open		>		
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$\leftarrow \rightarrow \checkmark \uparrow \blacksquare$ > This PC > Documents		م		
← → × ↑ 🗎 > This PC > Documents Organize ▼ New folder	> v Ø Search Documents	م		
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3. Cut and Paste files and folders.

- 1. Select the file/folder to be cut and pasted.
- Use the 'cut' command or X icon to cut. (At the same time the short cut of Ctrl+X can be used on the keyboard.)
- 3. Follow the procedure of pasting shown earlier.

4. Close a file

The file may be closed by clicking the \bigotimes button shown on the top right of your file. At the same time, you can use the Ctrl+W keys alternatively.





- 5. Maximize a window : The file may be maximized by clicking the button shown on the top right of your file.
- 6. Minimize a window :

The file may be minimized by clicking the button shown on the top right of your file.

7. Write the steps to be followed to save a file, close a file, etc in this table.

Activity	Giving command	Short cut keys	Other method
Opening a file	File→ open		right click open tool bar open
Closing a file			
Copying a file			
Pasting a file			
Cutting a file			








04. List five instances where special purpose software is used.

- •
-
-
- •

Activity 4.2

01. The following screenshots show how the mouse appears on a computer screen on different occasions. Describe when each mouse pointer appears on screen



02. Name the parts of the picture given below.





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01. Types of keys that can be seen on a keyboard are illustrated here. Write three examples for each type of keys.





E





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-	(i)	
	(ii)	
	(iii)	

02. Write down the tasks performed by the following keys.









03. Write five examples for graphic software.

04. Write five examples for word processing software.

-
-
-
- •

Activity 4.5

01. Get the teacher's assistance since the steps for the following activity may differ according to your version of operating system installed in your computer. Let's draw a picture of a clear blue sky with the sun using MS Paint software.







Use the blank drawing area to draw.

Step 1

Take the mouse pointer to shapes and click the left mouse button on the circle shape. (selecting the circle shape is shown below)



Step 2

Take the mouse pointer to the drawing area and drag the mouse by clicking the left mouse button. Then a circle shape will be drawn in the drawing area.

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Step 3

To select the pencil, click the left mouse button on the pencil symbol. When you take the mouse pointer to the drawing area, the arrow head will change to a pencil.



Now, to draw small lines around the circle, click the left mouse button and drag in necessary directions. In case of errors, click the left mouse button on the eraser icon, and erase casually as you use a real eraser.











Step 4

Again draw two small circles for eyes and cheeks inside the circle using the mouse pointer by selecting the circle shape.



Again draw a suitable shape for the mouth by selecting the pencil icon.

Step 5

Select black colour in the paint basket to colour the eyes.









Then, take the mouse pointer on the eyes and click the left mouse button. Click left mouse button on red colour, take the mouse pointer on the face and click the left button.



Click the left mouse button on the white background by selecting the blue colour to draw the blue sky.



Follow the Following steps to store your picture in the computer.

Step 1

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Go to the file menu and select Save.



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by using the Tux Paint software too.









A screen as shown below will appear when we use Tux Paint software. Beautiful creations like we did earlier can be made by using tools, brushes and colours in this software too.



Activity 4.6

- 01. Let's use the MS Word application
 - a. Click 📑
 - b. Select All Programmes
 - c. Click on MS Office
 - d. Select MS Word

Now you will see a screen as shown below.













Identify the characters shown on the screen by pressing various keys on the keyboard. To type capital or simple letters, use CAPS LOCK key or type with **shift** key. Get your teacher's assistance for that.

Now let's type numbers (1 2 3 4 5 6 7 8 9 10) using that software.

Press number 1 key on the keyboard to type number 1. Number 1



Use the space bar key to keep a distance between 1 and 2.



1 (space bar) 2

Now, 1 and 2 are typed as 1 2 Then type the remaining numbers. Now you will see 1 2 3 4 5 6 7 8 9 10

Press the Enter key to go to the next line.







Let's type the word 'computer'.

When you type after pressing the Caps Lock key you will get COMPUTER and if you press the same key again, you can type as 'computer'.

To type only one letter in capital, press the shift key with that letter key

Now on your screen, you will see as follows; 1 2 3 4 5 6 7 8 9 10 Computer

Now let's store the document you prepared in the computer. For that, follow the steps given below





Let's save by giving a suitable name.

	> This PC > Documents >	~ Ŭ	Search Documents	
Organize 🔹 Ne	v folder			• =
🔚 Pictures	* Name	Date modified	Туре	Size
📒 Camera Roll	The KMPlayer	9/6/2018 10:05 AM	File folder	
🧵 New folder	NFS Most Wanted	6/20/2018 8:48 AM	File folder	
Screenshots	Custom Office Templates	6/20/2018 10:47 A	File folder	
📒 Woody Wood	pe 🧧 Adobe	7/11/2018 1:35 PM	File folder	
🍠 This PC	~ <			
File name:	words			
	Word Document			
	ASUS Tags: A	Add a tag		

- 02. Let's use the LibreOffice Writer software.
 - 1. Click
 - 2. Select All Programmes.
 - 3. Select LibreOffice Writer.

You will get the screen as shown below

We can type our documents using LibreOffice Writer software same as word processing software that we studied earlier. At the same time, type characters and numbers shown in the activity by using previous knowledge you got and store it in the computer.











If you can have facilities in school, record the two short dramas prepared by the two groups, give a suitable name and store in the computer



Algorithm and Flowcharts	
Activity 5.1	
01. What are the three main components of a 'problem'?	
A	
B C	
Explain them briefly.	
A	
B	
C	
02. Write the input, process and output to find the perimeter of a rectangle.	
Input	
Process	
Output	
46 For free distribution	

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03.	Write suitable algorithm for preparing tea which is mentioned in question 3 of activity 5.1
	Activity 5.3
01.	What is a flowchart? Explain it briefly.

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02. Fill the gaps in the table.

	Name	Symbol	Usage
01	Start/ end		Showing Start and End of flowchart
02	Input/output		
03			To show the steps of the procedure
04			To show making decision
05	Flow lines		To show the flow of instructions





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Part 03









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