



Information and Communication Technology Syllabus Grade 6

To be implemented from 2018

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**Information and Communication Technology (ICT)
Grade 06 – Syllabus**

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1. Introduction

The Information and Communication Technology sector is acknowledged worldwide as a tool that could be used to increase the productivity, efficiency and effectiveness of work. However, in Sri Lanka, the level of ICT skills of the majority of the students is not adequate to meet the current requirements of business and industry. This is mainly due to lack of opportunities for students to study ICT related subjects in the school curriculum. The student should learn at school a wide variety of competencies for different needs of life in the changing world. They should have various views and different ways to continue studies and proceed to employment.

At present ICT is taught as a subject at G.C.E. (O/L) in a limited number of schools and at G.C.E. (A/L) in even less number of schools in Sri Lanka. In this situation students officially start to learn ICT at Grade 10 and as a result a heavy load of subject matter has to be included in ICT at G.C.E. (O/L). Distribution of ICT subject matter over lower Grades will definitely reduce this load and provide students with opportunity to learn ICT at early stages of school life. Therefore it has been decided to implement ICT as a subject from Grade 6 onward.

The time allocated for ICT at Grade 6 is limited to 30 Periods (40 minutes per Period) per year only. During this period, learning is more focused on practical aspects of the subject with limited amount of theoretical content. Students are expected to build ICT concepts through interaction with hardware and software of ICT.

2. National Goals

1. Based on the concept of respecting human values and understanding the differences between the Sri Lankan multi-cultural society, building up the nation and confirming the identity of Sri Lanka by promoting national integrity, national unity, national coherence and peace
2. While responding to the challenges of the dynamic world, identifying and conserving the National heritage.
3. Creating an environment which comprises of the conventions of social justice and the democratic life to promote the characteristics of respecting the human rights, being aware of the responsibilities, concerning each other with affectionate relationships.
4. Promoting a sustainable life style based on the people's mental and physical wellbeing and the concept of human values
5. Promoting the positive feelings needed for balanced personality with the qualities of creative skills, initiative, critical thinking and being responsible
6. Through education, developing the human resources, needed for the progress of the wellbeing of an individual, the nation as well as the economic growth of Sri Lanka.
7. Preparing the people for the changes that occur in a rapidly changing world by adapting to it and controlling them; developing abilities and potentialities of people to face the complex and unexpected occasions.
8. Sustaining the skills and attitudes based on justice, equality, mutual respect which is essential to achieve a respectable place in the international community.

National Education Commission Report (2003)

3. Basic Competencies

The competencies promoted through the education mentioned below might help to achieve the above mentioned National Goals.

(i.) Competencies in Communication

This set of competencies is made up of four subsets - Literacy, Numeracy, Graphics and Information & Communication Technology skills:

Literacy : Carefully listening, speaking clearly, and reading for comprehension, writing clearly and accurately.

Numeracy : Using numbers to count, calculate, code and to measure, matter, space and time.

Graphics : Making sense of line and form, expressing and recording essential data, instructions and ideas with line, form, color, two and three-dimensional configurations, graphic symbols and icons

ICT Competencies: Knowledge on computers, and the ability to use the ICT skills at learning or work as well as in the private life

(ii.) Competencies relating to the Personality Development

- Generic skills such as creativity, divergent thinking, initiative, decision making, problem-solving, critical and analytical thinking, team work, inter-personal relationships, discovering and exploring
- Values such as integrity, tolerance and respect for human dignity.
- Cognition

(iii.) Competencies relating to the Environment.

This set of competencies relates to the Social, Biological and Physical Environments.

Social Environment: Awareness, sensitivity and skills linked to being a member of society, social relationship, personal conduct, general and legal conventions, rights, responsibilities, duties and obligations.

Biological Environment: Awareness, sensitivity and skills linked to the living world, man and the ecosystem, the trees, forests, seas, water, air and life - plant, animal and human life.

Physical Environment: Awareness, sensitivity and skills relating to space, energy, fuels, matter, materials and their links with human living, food, clothing, shelter, health, comfort, respiration, sleep, relaxation, rest, wastes and excretion, media of communication and transport.

Included here are the skills in using tools to shape and for materials for living and learning.

(iv.) Competencies relating to preparation for the world of work

Employment related skills to maximize their potential and to enhance their capacity to contribute to economic development; to discover their vocational interests and aptitudes; to choose a job that suits their abilities and; to engage in a rewarding and sustainable livelihood

(v.) Competencies relating to religion and ethics

This set of competencies deals with values and attitudes. It is essential for individuals to assimilate values, so that they may function in a manner consistent with the ethical, moral and religious modes of conduct, rituals, practices in everyday living, selecting the most appropriate.

(vi.) Competencies in play and use of leisure

Competencies that link up with pleasure, joy, emotions and such human motivations. These find expression in play, sports, athletics and leisure pursuit of many types. These also link up with such values as cooperation, team work, healthy competition in life and work. Here are included such activities as are involved in aesthetics, arts, drama, literature, exploratory research and other creative modes in human living

(vii.) Competencies relating to ‘Learning to Learn’.

These competencies flow directly from the nature of a rapidly changing, complex and interdependent and crowded world. Whatever one learns, that learning will need updating and review. This requires that one should be aware of, sensitive and skillful in sustained attention, and be willing to persevere and attend to details that matter in a given situation.

4. Aims of the Information and Communication Technology (ICT) Curriculum

Such a surge in the growth, development and the application of Information Communication Technology as today has never been experienced before. The importance and relevance of ICT to almost all walks of life today has made it all the more important that knowledge and expertise, both practical and theoretical, of its application, should begin at the very grass roots level of education.

Aims to be achieved by the course are as follows:

- Develop basic skills useful to access ICT resources.
- Inculcate basic good practices in the use of ICT resources
- Inculcate basic computer literacy and develop a base for further pursuit of Information Technology and Communication Technology studies.

5. How the national goals are addressed in the curriculum

National Goals	Curriculum Aims	Curriculum Objectives (competencies)
Promoting the positive feelings needed for balanced personality with the qualities of creative skills, initiative, critical thinking and being responsible	Develop basic concepts in programming.	Appreciates the importance of computers
Through education, developing the human resources, needed for the progress of the wellbeing of an individual, the nation as well as the economic growth of Sri Lanka.	<ul style="list-style-type: none"> • Develop basic skills useful to access ICT resources. • Inculcate basic good practices in the use of ICT resources 	Appreciates the need for using computers safely
Preparing the people for the changes that occur in a rapidly changing world by adapting to it and controlling them; developing abilities and potentialities of people to face the complex and unexpected occasions.	Inculcate basic computer literacy and develop a base for further pursuit of Information Technology and Communication Technology studies.	<ul style="list-style-type: none"> • Uses operating systems • Use application software appropriately • Develop simple programs • Uses the Internet

Grade 6 Syllabus
Information and Communication Technology

Competency	Competency Level	Content	Learning Outcomes	Duration/ Periods
1. Appreciates the importance of computers	1.1 Explains the functions of the computer and its characteristics	<ul style="list-style-type: none"> • Basic components of computer- Input, Processing, Output, Storage • Computer vs. Human <ul style="list-style-type: none"> ○ Speed and Efficiency ○ Accuracy ○ Reliability ○ Consistency ○ Capacity of storage ○ Cost ○ Intelligence • Devices with embedded computers <ul style="list-style-type: none"> ○ Mobile Phones ○ Modern Televisions ○ Washing Machines ○ Automobiles 	<ul style="list-style-type: none"> i. Identifies the components of a computer ii. Elaborates its role in different environments iii. Lists the functions and characteristics of a computer iv. Identifies the devices with embedded computers 	1
	1.2 Identifies computer components	<ul style="list-style-type: none"> • CPU • Memory • Input/ Output devices • Storage devices • Communication devices 	<ul style="list-style-type: none"> i. Identifies CPU in a computer ii. Lists various input devices iii. Lists various output devices iv. Lists various storage devices v. Lists various communication devices 	2
	1.3 Describes the need for software	<ul style="list-style-type: none"> • Need of software • Examples of software <ul style="list-style-type: none"> ○ Games ○ Media player ○ Drawing software 	<ul style="list-style-type: none"> i. Explains the need of software ii. Lists various software 	1

	1.4 Appreciates the use of computer to carry out routine work	<ul style="list-style-type: none"> • Identification of areas of applications (educational software, library management system etc.) in the school and other fields • Role of computer in <ul style="list-style-type: none"> ○ schools ○ banks ○ hospitals ○ factories ○ farms 	i. Describes potential application areas in education and other fields	1
2. Appreciates the need of using computers safely	2.1 Uses computer lab properly	<ul style="list-style-type: none"> • Good practices to follow <ul style="list-style-type: none"> ○ Keeping the lab dust free ○ Avoiding food and drinks in the lab ○ Leaving the items used in the lab in proper order 	<ul style="list-style-type: none"> i. Comprehends the good practices in the lab ii. Follows the good practices in the lab 	1
	2.2 Uses computers and peripherals safely	<ul style="list-style-type: none"> • Correct steps to Start/Shutdown the computer • Ethics of using the computer • Correct posture to minimize health issues • Management of e-waste (Safe disposal of computer hardware) • Use of passwords to avoid unauthorized access 	<ul style="list-style-type: none"> i. Follows the correct steps to Start/ Shutdown the computer ii. Uses the computer ethically iii. Safely disposes the obsolete computers/peripherals iv. Understands and practices the safe use of computers 	1
3. Uses operating systems	3.1 Handles files	<ul style="list-style-type: none"> • File handling using a simple drawing software <ul style="list-style-type: none"> ○ Create ○ Save ○ Open ○ Edit ○ Close • Minimizing / Maximizing / Resizing of a window 	<ul style="list-style-type: none"> i. Creates and saves a file ii. Opens and edits a file iii. Practices to maximize/ minimize/ resize a window 	2

4. Uses application software appropriately	4.1 Uses text editing and drawing software effectively	<ul style="list-style-type: none"> • Use of drawing software to use the mouse properly • Use of typing software to develop keyboard skills 	<ol style="list-style-type: none"> Uses mouse and keyboard effectively Types using correct finger movements Draws pictures with mouse 	5
	4.2 Uses audio software and video software effectively	<ul style="list-style-type: none"> • Use of audio software to create an audio clip • Use of video software to create a video clip 	<ol style="list-style-type: none"> Creates an audio file Creates a video file 	2
5. Appreciates the concept of algorithms and develops simple programs	5.1 Relates practical problem solving process to an algorithm	<ul style="list-style-type: none"> • Making of a composition according to a recipe (Ex. Making a cake) 	<ol style="list-style-type: none"> Identifies process of problem solving as a series of steps 	2
	5.2 Draws flowcharts to explain a process	<ul style="list-style-type: none"> • Introduction to flowchart symbols <ul style="list-style-type: none"> ○ Start/Stop ○ Input/ Output ○ Process • Flowcharts to explain simple sequential processes of day to day tasks 	<ol style="list-style-type: none"> Identifies flowchart symbols Represents a process with a flowchart. 	3
6. Appreciates the Internet for information gathering and communication	6.1 Identifies Internet as a collection of shareable pool of information resources	<ul style="list-style-type: none"> • Introduction to the Internet • Accessing educational websites to practice browsing 	<ol style="list-style-type: none"> Defines the Internet Accesses the Internet Obtains information through educational web sites 	3
	6.2 Uses search engines to obtain	<ul style="list-style-type: none"> • Introduction to search engines • Information searching on a specific topic 	<ol style="list-style-type: none"> Lists different Search Engines Obtains information using 	5

	information	using Search Engines	Search Engines	
	6.3 Uses computers and data safely and securely	<ul style="list-style-type: none"> • Application of access control mechanism (Username, Passwords, etc.) 	<ul style="list-style-type: none"> i. Follows safety and security procedures ii. Realizes the importance of guidance of trusted mentors 	1
Total				30