

DIATHEMATIKON PROGRAMMA
CROSS-THEMATIC CURRICULUM FRAMEWORK
FOR INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

1. Teaching/learning aim

Present rapid developments in the field of Information and Communication Technologies (ICT) together with computer and Internet expansion, considerably affect society, creating new needs and trends. New issues emerge, relating to information organization and management, computer-based instruction and dissemination of information, work planning and distribution, long distance communication, human identity, etc. This fact coupled with the continuously increasing knowledge and information expansion and fast outdated pose specific requirements on young people who should acquire computer literacy skills together with the necessary critical thinking and communication skills that will enable them to understand current developments and the world around them. Apart from being useful everyday tools, computers can bring major changes to educational practice, facilitating innovative and active ways of learning and assisting the development of new attitudes and skills. In this respect, computer becomes an interdisciplinary tool for accessing knowledge and information.

ICT education provides access to cultural and scientific knowledge and life-long and individualized learning. It can also improve the quality of education provided to people with special needs in regular classrooms or in special integration classes. At the same time it can assist the connection of the school curriculum with the world of work, providing opportunities for personal and social development.

ICT aims to provide pupils with opportunities to develop basic computer literacy as well as critical thinking skills and to enhance their motivation for creative action at a personal and social level. Moreover, ICT aims to help pupils develop those skills and attitudes necessary for positive interpersonal and group relationship and recognize the importance of and need for ethical and moral standards of behavior. Pupils should become familiar with the use of the computer as a tool that can enhance their learning, help them explore, develop, interpret and communicate information (using appropriate software) in the context of everyday school practice. Developing understanding of the use of ICT in major areas of social activity, including information processing in school and professional settings, communications, entertainment and computer-based learning, can facilitate student-centered teaching practices

and provide opportunities for individualized learning. Last but not least, it can help pupils acquire the necessary critical thinking and cooperation skills that will provide equal opportunities for access to knowledge and life long learning.

2. Content Guiding Principles, General Goals, Indicative Fundamental Cross-thematic Concepts

At present ICT is included only in the junior high school curriculum while with the present revised curriculum it is now being introduced to Primary school curriculum, following the ‘holistic model’ of learning, according to which the educational aims are achieved through the infusion of ICT into the other subjects. To combine the two curriculum models ICT topics have been organized according to grade level on the basis of content guiding principles. These principles in turn have been developed and specified according to grade level, pupils’ age and cognitive ability. The teaching and learning aims should always be taken into consideration.

General goals are grouped according to three guiding principles: Knowledge and Methodology, Cooperation and Communication and Science and Technology in everyday life.

a. Knowledge and Methodology

Pupils are introduced to fundamental concepts regarding the structure and principles of computer systems. They explore a variety of application tools, including word processing and other kinds of software for general use and acquire methodological skills. They become familiar with the computer as a tool for discovery, creation and self-expression as well as a tool of developing their thinking abilities. They develop an understanding of and explore a variety of information sources and ICT applications, including educational multimedia software, searching the Internet and interactive software.

b. Cooperation and Communication

Pupils become skillful in using the operating system and application tools, including educational software as well as software for word processing, painting, searching the Internet, etc. They use ICT in the context of project work.

c. Science and Technology in everyday life

Pupils reflect critically on the impact of ICT on people’s lives, considering the social, legal, ethical and moral issues (for example, Internet copyright, information security,

netiquette etc).

I. Primary school

Grade	Content Guiding Principles	General goals (Knowledge, skills, attitudes and values).	Indicative Fundamental Cross-thematic Concepts
1st 2nd	Becoming familiar with computers	<p>Pupils should:</p> <p>recognize and understand the function of the devices and peripherals of a typical computer system;</p> <p>become informed about user protection and ergonomics;</p> <p>understand the importance of comfortable posture when sitting in front of a computer;</p> <p>become familiar with the use of computers in the home, school and workplace context.</p>	Technology System Hygiene Cooperation
	Playing and learning with computers	practice starting and closing down an application, receiving initially some help from the teacher but gradually acquiring autonomy.	Function Progress Speed Expression
	Communicating electronically	start visiting selected Internet sites (www).	Communication Space-Time Speed Progress
3rd 4th	Becoming familiar with computers	be introduced to computer Graphics User Interface (GUI).	Technology Progress Communication Organization

			Organization Symbolism
	Playing and learning with computers	acquire word processing and painting skills; learn how to gather information from a variety of sources, including electronic dictionaries, databases, etc; practice saving and opening files initially with the help of the teacher and gradually on their own.	Creation Expression Space-Time Organization Classification Change Adjustment/ Adaptation
	Communicate electronically	visit and explore selected Internet sites (www).	Communication Space - Time
5th 6th	Becoming familiar with computers	be introduced to the computer as a whole system	System Organization
	Using word processing and graphics software	become familiar with simple text format; learn how to insert a picture in a text; learn how to store and retrieve a file.	Creation Expression Space – Time Organization
	Calculating and graphics design	learn how to present information in tables; be introduced to graphics design.	Creation Expression
	Controlling and programming	be introduced to a simple programming language (Logo like) for computer control and programming.	Problem Organization Selection Change Adjustment Communication Interaction
	Creating- D... .	learn how to search, gather, select, process	Organization

	Discovering- Exchanging and sharing information	and present information.	Selection Processing Interaction
	Communicating through e-mail	acquire skills in using electronic mail (e-mail) initially with help and gradually on their own.	Communication Space-Time Technology Progress/ Development
	The computer and its Applications	Usage of computer in every day life; Discussion – Concerns.	Technology Communication Cooperation Change Balance Interdependence Space-Time Attitude Problem Adjustment Development Exploitation

II. Junior High school

Grade	Content Guiding Principles	General goals (knowledge, skills, attitudes and values)	Indicative Fundamental Cross-thematic Concepts
1 st	Becoming familiar with the computer as a	Pupils should: develop an understanding of basic ICT concepts;	Technology System

	computer as a whole system	be introduced to the history of computers; become familiar with computer hardware; become familiar with computer software; become aware of issues of hardware, software and data protection; become aware of issues of ergonomics and health protection.	Change Code Communication Space – Time Hygiene Cooperation
	Finding, storing, managing and retrieving information	become familiar with Graphics User Interface environment. become familiar with the use of Web browsers	Communication Technology Expression Aesthetics Symbolism Time - Space
	Using application tools for: Presenting ideas Exchanging and sharing information Finding things out	be taught to: present their ideas using text and pictures; exchange and share information through the Internet; develop organization, cooperation, scheduling and participation skills; develop a sense of responsibility.	Communication Technology Expression Symbolism Time – Space Change Progress Cooperation Interaction
	Using ICT inside and outside school	Use of Computer in every day life (at school, at home, in banks etc.)	Technology Communication Expression Time – Space Change

			Progress/ Development Communication Exploitation Interaction
2nd	Becoming familiar with the computer as a whole system	develop knowledge and understanding of: computer devices and peripherals, multimedia computers, their features and multimedia applications; develop an understanding of: data and information representation; computer networks and their uses.	System Time – Space Communication Symbolism Code Organization Part - Whole
	Finding, storing, managing and retrieving information	be taught how to: find, store, manage and retrieve information for particular purposes.	Technology Linearity Interaction Organization Change
	Using ICT tools for: Presenting ideas Exchanging and sharing information Finding things out	be taught how to use application tools for: arithmetic processing and graphical data representation presentations; exchanging and sharing information via the Internet.	Technology Communication Time – Space Classification Exploitation Change Problem Expression Reliability Cooperation
	Using ICT in the workplace	reflect critically on the impact of ICT on their own and others' lives, considering issues like changes to working practices due to introduction and use of new technologies. Emerging needs.	Technology Work Time – Space Exploitation Change

			Adjustment Need
3rd	Becoming familiar with the computer as a whole system	programming languages; main stages in computer problem solving (troubleshooting); creating and executing a program.	Problem Solution Evaluation Organization Sequence Change Adjustment Communication Interaction
	Using ICT tools for: Presenting ideas Exchanging and sharing information Finding things out	Creating a multimedia application.	Expression Aesthetics Interaction Linearity Cooperation Evaluation
	The impact of ICT on society and culture	become aware of the impact of ICT on science, art, culture, language, the environment, the quality of life etc.	Technology Culture Digital world Environment Communication Interaction Work Progress/ Development Exploitation