Müfredat Geliştirme

Curriculum Development in Vocational Education and Training Schools

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Annex 14
Delivery of Foreign Language in Occupation

Packages of the Learning Materials for
1. Computer technical services and operation technician
(Hardware and Networking)
2. Software and web operations

Grade: 9, 10, 11

Contents

Delivery of Foreign Language in Occupation: Packages of Learning materials, Computer technical services / Software and web operations

3

Exit level of the whole period of Foreign Language education 9th – 12th grade

Target group and position	Students in vocational schools trained as Computer technical services and operation technician (Hardware and Networking) and Software and web operations in 9th, 10th and 11th and 12th grade who need to communicate in English to native speakers and non-native speakers in English; students who will need English as part of their job to communicate on a frequent or occasional basis to foreigners at their work place using digital means of communication or related to digital means of communication. They do not usually need a foreign language in demanding interactive situations.
Entry level and Exit level	Listening A1+ - B1 Reading A1 -A2 Spoken interaction A1+ -B1 Spoken production A1-B1 Writing A1 - A2 The levels are described according to the Common European Framework of Reference for Languages: learning, teaching, assessment (CEFR). CEFR was designed to provide a transparent, coherent and comprehensive basis for the elaboration of language syllabuses and curriculum guidelines, the design of teaching and learning materials, and the assessment of foreign language proficiency.

Entry and Exit Level for the whole period of learning

According to the European Framework of reference

	A1	A2	B1	B2	C1	C2
Listening						
Reading						
Spoken Interaction						
Spoken Production						
Writing						

	Entry level
	Exit level

Description of language skills Exit level for the whole period of education

Occupations:

- Computer technical services and operation technician (Hardware and Networking)

- Software and web operations

Level of language skills	General language skills	Professional language skills
Understanding Listening B1	Can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. Can understand the main points of radio and TV programmes on current affairs or topics of personal or professional interest when the delivery is slow and clear.	➢ Can follow everyday conversations if speech is carefully articulated though words and expressions may need to be repeated. ➢ Can understand information about everyday events if speech is clear and pronunciation – standard. ➢ Can understand the main points in a well-structured, factual presentation in my area of work or interest. ➢ Can understand the main points in TV and radio broadcasts, advertisements, commercials, presentations and promotions if speech is clear, comparatively slow and topic is familiar. ➢ Can understand the main aspects of longer talks/meetings referring to routine work-related matters when standard language is used.

Reading A2	Can read very short, simple texts. Can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and can understand short simple personal letters.	➢ Can understand short, simple texts composed of the most common words and expressions including international words. ➢ Can understand short, simple job-related texts and letters/orders. ➢ Can understand standard routine correspondence (letters, faxes, e-mails), e.g. concerning simple arrangements ➢ Can identify familiar and predictable information in advertisements, leaflets and timetables. ➢ Can understand simple operating instructions, e.g. in lifts, on public telephones, cash machines, etc. ➢ Can scan simple written materials such as brochures and short newspaper articles and extract factual information I need ➢ Can read and extract the necessary information related to my work tasks.
Spoken interaction B1	Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life, especially if the conversation is about routine activities in a predictable context.	➢ Can handle most situations likely to arise in business and on travelling to a country where the language is spoken. ➢ Can handle a conversation as long as it concerns routine activities within a familiar and/or predictable context. ➢ Can hold a spontaneous conversation on familiar topics of personal and professional interest. ➢ Can give or seek personal views and opinions on familiar topics in an informal discussion with friends/colleagues, agreeing and disagreeing politely.
	Can connect phrases in a simple way in order to	➢ Can give comparatively detailed accounts of experiences, events, work processes etc.

Spoken production B1	describe experiences, events, hopes and ambitions related mostly to my professional life. Can briefly give reasons and explanations for opinions and plans related to familiar professional, everyday and social issues.	➢ Can give routine information about own area of work/department/company/product. ➢ Can give a brief summary of a story, e.g. the plot of a book or film and make comments on it. ➢ Can give reasons for my plans, opinions, decisions and actions.
Writing A2	Can write short, simple notes and messages, relating to matters in areas of immediate need. Can write a very simple personal letter, for example thanking someone for something.	• Can write short letters, fax messages, e-mail messages, memos following a sample • Can write SMSs using standard abbreviations. • Can take notes related to matters of immediate interest in work • Can fill in forms or questionnaires briefly describing personal and job-related information. • Can produce short messages, faxes or e-mails with simple variations on memorised language. • Can give directions how to get to a meeting, place or company in a written form. • Can give short accounts of past or present events and activities, or of future plans. • Can briefly describe something or somebody.

GRADE 9

Description of module content and learning objectives

Module objectives 9th grade	The module is skill-oriented and emphasizes on developing and consolidating practical skills in a variety of relevant work-related contexts. It focuses both on fluency in language use as well as on accuracy. Students learn and practice **how to**: **General linguistic range** • use isolated words/signs and basic expressions in order to give simple information about themselves. • use a very basic range of simple expressions about personal details and needs of a concrete type. • use some basic structures in one-clause sentences with some omission or reduction of elements.
Module 1 Focus on vocabulary	
Use of terminology in the foreign language	**Vocabulary range** • effectively apply and make use of a basic vocabulary repertoire of words/signs and phrases related to particular concrete situations. **Grammatical accuracy** • employ very simple principles of word/sign order in short statements. Shows only limited control of a few simple grammatical structures and sentence patterns in a learnt repertoire.

	Vocabulary control • control a narrow repertoire dealing with concrete, everyday needs. • pronounce a very limited repertoire of learnt words and phrases which can be understood with some effort by interlocutors used to dealing with speakers of the language group. • reproduce correctly a limited range of sounds as well as stress for simple, familiar words and phrases. • reproduce sounds in the target language if carefully guided. • articulate a limited number of sounds, so that speech is only intelligible if the interlocutor provides support (e.g. by repeating correctly and by eliciting repetition of new sounds). • use the rhythm and intonation of a limited repertoire of simple words and phrases intelligibly, in spite of a very strong influence on stress, rhythm and/or intonation from the other language(s) they speak; their interlocutor needs to be collaborative.
Module 2 Professional communication in the foreign language	Students learn and practice **how to** Interact with colleagues or customers generally and more specifically for the level **how to**: Verbally • establish basic social contact by using the simplest everyday polite forms of: greetings and farewells; introductions; saying please, thank you, sorry, etc. However, repair of communication is often required • • adapt well-rehearsed, memorised, simple phrases to particular circumstances through limited lexical substitution and difficulties in articulating less familiar words is usual. • communicate basic information about personal details and needs of a concrete type in a simple way. • communicate very basic information about personal details in a simple way, while pausing is expected and usual to search for expressions • manage very short, isolated, rehearsed utterances using gesture and signalled requests for help when necessary.

	In Writing
	 • write short messages, e-mail messages using a template. • write SMSs using standard abbreviations. • can fill in forms with personal details (job, age, address, etc. • can write simple isolated phrases and sentences, which I have memorized or copied. • can write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things.

Description of language skills

Level of language skills	General language skills	Professional language skills	Examples **Teaching and learning resources developing these occupational skills**
Understanding Listening **A1+**	can recognise familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak/sign slowly and clearly. Can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information,	➢ can understands phrases and expressions related to the most immediate priority in the work environment ➢ can identify the topic of discussion ➢ can follow speech which is very slow and carefully articulated ➢ can understand instructions addressed carefully and slowly ➢ Can catch the main point in short, clear, simple message and announcements ➢ Can understands simple technical information, such as operating instructions for everyday equipment ➢ Can extracts the essential information from short, recorded passages dealing with predictable everyday work matters	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercises 5, 6 and 7 of Unit 1, 2, 3, 7, 8, 9, 11; ▪ Book 2 Exercises 5, 6 and 7 of Unit 2; ▪ Book 3 Exercises 5, 6 and 7 of Unit 1, 7 and 10 ▪ Listening for specific occupation related information with a focus on vocabulary) very basic repertoire of words and simple phrases related to the topic) From Computing, Express Publishing ▪ Book 1, Exercises 5, 6 and 7 of Unit 1, 2, 3, 4, 5, 12, 13, 14; ▪ Book 2 Exercises 5, 6 and 7 of Unit 1, 2, 3, 4, 5 and 6; ▪ Book 3 Exercises 5, 6 and 7 Tasks developed by the teacher

	shopping, local area, employment). Can catch the main point in short, clear, simple messages and announcements.		▪ Guidelines for construction of tasks
Reading **A1+ to A2**	Can read very short, simple texts. Can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and can understand short simple personal letters.	➢ can read and extract the necessary information related to working environment and the occulation. ➢ can extract the important information and main points from short specialised texts, manuals, orders, instructions, etc. ➢ can get a general understanding of a occupation-specific text.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercises 2 and 3 of Unit 1, 2, 3, 7, 8, 9, 11; ▪ Book 2 Exercises 2 and 3 of Unit 2; ▪ Book 3 Exercises 2 and 3 of Unit 1, 7 and 10 ▪ Reading for specific information in the occupation with a focus on vocabulary (very basic repertoire of words and simple phrases related to the topic) From Computing, Express Publishing ▪ Book 1, Exercises 2 and 3 of Unit 1, 2, 3, 4, 5, 12, 13, 14; ▪ Book 2 Exercises 2 and 3 of Unit 1, 2, 3, 4, 5 and 6; ▪ Book 3 Exercises 2 and 3 Tasks developed by the teacher

			Guidelines for construction of tasks
Speaking Spoken interaction **A1+**	can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate and help me formulate what I am trying to express. can ask and answer simple questions in areas of immediate need or on very familiar topics. Can communicate in simple and routine tasks requiring a simple and direct	➢ can exchange information on a variety of simple and routine matters directly related to the immediate work environment. ➢ can ask questions, confirm information and avoid misunderstanding ➢ can handle a simple conversation in order to obtain goods and services ➢ can handle simple social exchanges with customers/colleagues, e.g. introductions, invitations, apologies. ➢ can ask and answer simple questions about someone's preferences, requests, purchases and orders. ➢ can ask and answer questions about my own area of work using simple language. ➢ can ask for and give directions referring to a map or plan. ➢ can discuss in a very simple way events, activities and plans. ➢ can take simple telephone calls or put callers through. ➢ can make arrangements concerning meeting points/date/time/arrival and departure, when simple language is used.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercise 8 of Unit 1, 2, 3, 7, 8, 9, 11; ▪ Book 2 Exercise 8 of Unit 2; Book 3 Exercise 8 of Unit 1, 7 and 10 ▪ Speaking and interacting with a partner on job-specific topics (very basic repertoire of words and simple phrases related to the topic) ▪ Role play (in pairs) getting someone's attention, giving instructions, indicating a course of actions, making suggestions, identifying a problem, checking for errors, expressing confusion, making comparison, asking about knowledge, making a recommendation, describing a problem, etc. From Computing, Express Publishing ▪ Book 1, Exercise 8 of Unit 1, 2, 3, 4, 5, 12, 13, 14; ▪ Book 2 Exercise 8 of Unit 1, 2, 3, 4, 5 and 6; ▪ Book 3 Exercise 8 Tasks developed by the teacher

	exchange of information on familiar topics and activities. Can handle very short social exchanges, even though cannot usually understand enough to keep the conversation going myself.		▪ Guidelines for construction of tasks
Spoken production **A1/A1+**	can use simple phrases and sentences to describe where I live and people he/she knows. Can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	➢ can describe myself and my environment, using simple language. ➢ can give a simple account of my work place, my job or company. ➢ can produce simple mainly isolated phrases about people and places related to my occupation. ➢ can read a very short, rehearsed statement – e.g. to introduce a person, propose a product.	Oral production (speaking) activities: ▪ The language user produces an oral text which is received by an audience of one or more listeners. ▪ Examples: reading a written text aloud, speaking from notes or visual aids (diagram, pictures, charts, etc.) ▪ Acting out a rehearsed role See above exercises for speaking interaction: ▪ Distribute role cards – students read their role cards ▪ Write a diagram of the role play words/sentences on the board

| Writing A1 | Can write short, simple notes and messages. Can write a very simple personal letter, for example thanking someone for something. | can write short letters, messages, e-mail messages, memos following a sample can write SMSs using standard abbreviations. can take notes related to matters of immediate interest in work can fill in forms with personal details (job, age, address, etc. can write simple isolated phrases and sentences, which I have memorized or copied. can write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things. | From Information Technology, Express Publishing, 2022

Book 1 Exercise 9 of Unit 1, 2, 3, 7, 8, 9, 11;
Book 2 Exercise 9 of Unit 2; Book 3 Exercise 9 of Unit 1, 7 and 10
Writing: filling in an information text, a form, a feedback form, a prepared note, etc.
From Computing, Express Publishing

Book 1, Exercise 9 of Unit 1, 2, 3, 4, 5, 12, 13, 14;
Book 2 Exercise 9 of Unit 1, 2, 3, 4, 5 and 6;
Book 3 Exercise 9
Tasks developed by the teacher

Guidelines for construction of tasks |

Teaching/learning contents (guide lines) - 9th grade

- Computer technical services and operation technician (Hardware and Networking)
- Software and web operations

2 teaching hours per week

TOPIC/ CONTEXT Topics from the *Curriculum Package* **Computer Technical Services and Operation Technician (Hardware and Networking)**	Resources See examples of appropriate resources	*Comments Linguistic aspects/teaching and learning methods*
HARDWARE UNITS External units	Information & Communication Technology, Vocational English Courses, by Çiğdem Ölçter - Yağiş Yildirim, Mint Advertising (digital version) Unit 1.1. Computer Hardware, p. 18-36 From Computing, Express Publishing, 2022 Book 1	

Internal	Unit 1 Types of Computers p. 4-6; Unit 2 Monitors, p. 6-7; Unit 3 Keyboards, p. 10-11; Unit 4 Mice From Information Technology, Express Publishing, 2022 Book 1 Unit 2 Introduction to Computing Systems, p. 6-8 From Computing, Express Publishing, 2022 Book 1, Unit 5 Inside the Computer, p. 12-13 From Information Technology, Express Publishing, 2022 Book 1, Unit 3 Inside the Computer, p. 8-10 Vocational Foreign Language version, Department of Information Technologies, 11-12 course material, by Dr. Selçuk Yusuf ARSLAN, Çiğdem TUFAN TUĞCU and	

	Hülya ÖZKAN Unit 1.2 Computer Components, p. 36-52 1.2.1. Keyboard 1.2.2. Mouse 1.2.3. Monitor 1.2.4. Printers 1.2.5. Scanners From Computing, Express Publishing, 2022 Book 2 Unit 1, Word processing: uses, p. 4-6		
PACKAGE PROGRAM Word processing	Unit 2 Word processing: actions, p. 6-8 Unit 3 Word processing: formatting, p. 8-10 From Information Technology, Express Publishing, 2022 Book 1		

	Unit 7 Word Processing, p. 16-18	
	Information & Communication Technology, Vocational English Courses, by Çiğdem Ölçter - Yağiş Yildirim, Mint Advertising (digital version)	
	Unit 4 Web, graphic and animation concepts	
	Vocational Foreign Language version, Department of Information Technologies, 11-12 course material, by **Dr. Selçuk Yusuf ARSLAN, Çiğdem TUFAN TUĞCU and Hülya ÖZKAN** Unit 2.3. Web, Graphics and Animation, p. 64-79	
Internet and Email	From Computing, Express Publishing, 2022	
	Book 1	
	Unit Email 12, 13 and 14, p. 26-32	
	From Information Technology, Express Publishing, 2022	
	Book 1	
	Unit 8 Email, p. 18-20	

	From Information Technology, Express Publishing, 2022 Book 1 Unit 9 Web Browsing, p. 20-22	
PROGRAMMING FUNDAMENTALS	From Information Technology, Express Publishing, 2022 Book 2 Unit 2 Programming languages, p. 6-8 Information & Communication Technology, Vocational English Courses, by Çiğdem Ölçter - Yağiş Yildirim, Mint Advertising (digital version) Unit 2 Computer Software	
OPERATING UNITS	From Computing, Express Publishing, 2022 Book 3 Unit 1 Operating Systems, p. 4-6	

Assessment:

➢ <u>Self-assessment</u>: According to the scale in the self-assessment grid of the Common European Framework (CEF)
➢ <u>Tutor assessment</u>: Tests, quizzes, case studies, simulations, role plays
➢ <u>Final assessment:</u> Test, case study

Recommended learning time:

➢ 60 hours face to face learning
➢ 60 hours individual learning

Vocabulary focus for reading and listening comprehension

Occupation: Computer technical services and operation technician (Hardware and Networking)

Getting Started provides warm-up questions about the chapter topic. The questions' main purpose is to activate students' prior knowledge about the topic before they read the passage or listen to the audio file. The 'Get Ready!' exercise includes suggestions of questions that can serve this function. The teachers can also ask additional questions related to the school and occupational environment to activate students' prior knowledge.

Target words (terms)

Each unit introducing target words and asks students to assess their knowledge of each word both before and after they work through the chapter. Vocabulary learning is incremental (gradual, step-by step). Revision is required at least 3-4 times during the school year in various contexts. Even if students do not achieve productive mastery of every word by the time the chapter is finished, the process can show partial improvement (for example, from *no knowledge* to *receptive knowledge*). By avoiding a *no knowledge / full mastery dichotomy*, the process can show smaller degrees of learning. We would expect every student to learn enough about the target words to show some improvement, which should maintain and enhance their motivation.

Reading presents a reading passage that has been graded in various levels of difficulty. The embedding of the target vocabulary in these texts ensures that it is not introduced in isolation, but in meaningful contexts. There is also a great deal of target vocabulary in these texts that is not specifically focused on in the chapter, and that provides natural recycling in new contexts of words students have already studied.

In addition, the passages are suitable for a wide range of reading-based tasks that can be constructed by the teacher to ensure mastering of target words. This integration of reading and vocabulary allows the study of lexis in programs that have a reading focus, and promotes the beneficial concurrent improvement of reading and vocabulary skills. For example, at the end of each passage, there are exercises (Reading Comprehension) that focus on comprehension ranging from literal details, recognition o true/false, matching of terms with definitions and filling gaps with targeted words.

Focusing on Vocabulary means:

• Word Meaning features a variety of exercises designed to help students learn the meaning of each of the twenty-four target words.

• Word Families provides practice in recognizing and using the various derivative word forms that make up a word's family (or words of the same category).

• Collocation exercises are designed to improve students' intuitions about the collocations a word takes (mouse, LED mouse, laser mouse, ball mouse).

Vocabulary Learning Strategies

To learn target words well, students will need to continue meeting and learning these word families outside of this book. This means you will need to use vocabulary strategies to maximize your learning. Below, we describe a number of these vocabulary learning strategies.

USING A DICTIONARY
One of the most important reasons to use a dictionary is to discover a word's meaning. However, many words have more than one meaning, and you must be careful to choose the one that matches the context.

3 Match the words or phrases (1-8) with the definitions (A-H).

1 __ Mac		5 __ hardware	
2 __ Windows		6 __ software compatible	
3 __ macOS		7 __ processing speed	
4 __ Linux		8 __ vulnerable	

A a computing device
B being able to run different programs
C an operating system developed by Apple
D an operating system that uses open source software
E a measure of how fast a computer operates
F an operating system developed by Microsoft
G a computer developed by Apple
H open to attack

Teachers can design similar tasks using a dictionary or the glossary to the teaching and learning resources as part of this package.

GUESSING FROM CONTEXT

Guessing the meaning of a new word from context is a very good way to supplement the learning of vocabulary from a book like this. You can get clues from the surrounding words and the construction of the sentences.

Teachers can use short texts for guessing from context. The teachers can ask questions such as:

What is the meaning of ……..?
What are the clues that helped you discover this meaning?
How could this help you understand the meaning of ……….?

EXTENSIVE READING

Although students gain a lot of benefits from studying words, they also need to see or hear them in many contexts to understand how to use them appropriately. One of the best ways to gain this wide exposure is to read extensively. The repeated exposure to words in reading will help students remember their spellings and meanings, and will also show the other words they commonly occur with. In other words, by reading widely, you will eventually begin to get a feel for which words collocate with the words you are learning.

USING INTERNET TOOLS

Nowadays, there are many Internet sites that can help your learning. Teachers can use internet sources for allowing for extensive reading and seeing target words in many contexts to understand how to use them appropriately.

Guide to Vocabulary Focus Approach – 9th grade

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary	Comments /Additional target words
				Book 1	
	1	Information Technology	Reading a statement from a CEO (true/false statements)	code, data, data processing, encode, hardware, information security, online, quality assurance, software, technical support	
	2	Introduction to computing systems	Reading an email about computers (multiple choice questions)	desktop computer, laptop, mainframe, server, smartphone, supercomputer, tablet, workstation	
	3	Inside the computer	Reading a technology guide about computer assembly (multiple choice questions)	case, disk drive, expansion card, fan, hard drive, heat sink, motherboard, power supply, processor, RAM	
	7	Word processing	Reading an advertisement for a new word processing	compatibility, document, font, format, formatting, layout, macro, spell check, template, word processing program	

		program (true/false statements)		
	8	Email	Reading an excerpt from the employee handbook guide (true/false statements)	attachment, domain name, email address, email client, ISP, password, POP3, SMTP, username, webmail	
	9	Web browsing	Reading an email from an IT department (true/false statements)	HTML, http, hyperlink, meta tag, search engine, URL, web browser, web host, website, www	
Book 2					
	2	Programming languages	Reading a letter from the head of a computer programming department to her boss (multiple choice questions)	C, C#, C++, compiler, computer language, CPU, Java, JavaScript, linker, machine code, multi-thread, Python, Swift	

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary	Comments / Additional target words
				Book 1	
	1	Types of Computers	Reading a magazine article (multiple choice questions)	computer, desktop computer, laptop, notebook, personal computer, portable, processing power, server, tablet, workstation	
	2	Monitors	Reading an article (multiple choice questions)	aspect ratio, contrast, display, HD, LCD, LED, monitor, resolution, response time, screen	
	3	Keyboards	Reading a blog post (completing a table)	Alt key, Caps Lock, Control key, diacritical mark, function key, keyboard, numeric keypad, QWERTY, Shift key, type	
	4	Mice	Reading a product listing (multiple choice questions)	ball mouse, click, button, cordless, laser mouse, LED mouse,	

			mouse, scroll wheel, scrolling, USB	
	5	Inside the Computer	Reading a magazine article (multiple choice questions)	case, CPU, disk drive, fan, hard drive, heat sink, motherboard, optical drive, port, power supply, processor, removable drive, USB port	
	12	E-mail 1	Reading an article (multiple choice questions)	address book, drafts folder, email, email address, email client, inbox, junk mail, sent folder, trash folder, webmail	
	13	E-mail 2	Reading an e-mail (true/false statements)	attach, Bcc, Cc, create, forward, recipient, reply, reply all, subject	
	14	E-mail 3	Reading an article (multiple choice questions)	attachment, bounce back, configure, domain name, exceed, maximum, POP3 server, SMTP server, spam, time out, typo	
Book 2					

	1	Word Processing: Uses	Reading a guide (multiple choice questions)	agenda, blank, business card, calendar, create, document, memo, report, résumé, template, word processing	
	2	Word Processing: Actions	Reading a manual (multiple choice questions)	close, copy, cut, delete, edit, open, paste, redo, save, save as, select, undo	
	3	Word Processing: Formatting	Reading a memo (multiple choice questions)	bold, bullet, center, column, font, format, indent, italic, margin, spacing, spell check, underline	
				Book 3	
	1	Operating Systems 1	Reading a letter (true/false statements)	Apple®, color matching, customize, hardware, Linux®, MacOS, Mac®, Microsoft®, OS X®, prepress, processing speed, software compatible, upgrade, vulnerable, Windows®	

Resource for distribution of the teaching/learning content – 9th grade

(using the description of the teaching/learning content you can indicate when during the school year you plan to use the relevant units and exercises for developing of language skills; under comments you can indicate whether revision is needed and when)

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	1	Information Technology	Reading a statement from a CEO (true/false statements)	Listening to a conversation between an employee and her supervisor (multiple choice questions); Completing a conversation	Acting out a dialogue between a supervisor and an employee	Filling out a transfer request	
	2	Introduction to computing systems	Reading an email about computers (multiple choice questions)	Listening to a conversation between an IT professional and a new employee	Acting out a dialogue between a new employee and an IT Professional	Filling out notes	

				(multiple choice questions); Completing a conversation			
	3	Inside the computer	Reading a technology guide about computer assembly (multiple choice questions)	Listening to a conversation between a technology support specialist and a customer (true/false statements); Completing a conversation	Acting out a dialogue between a customer and a support specialist	Filling out a feedback form	
	7	Word processing	Reading an advertisement for a new word processing program (true/false statements)	Listening to a conversation between an IT professional and a computer user (multiple choice questions); Completing a conversation	Acting out a dialogue between an IT professional and a user	Filling in an email	
	8	Email	Reading an excerpt from the employee handbook guide (true/false statements)	Listening to a conversation between an employee and a customer (multiple choice questions);	Acting out a dialogue between an employee and a customer	Completing a troubleshooting guide	

			Completing a conversation			
9	Web browsing	Reading an email from an IT department (true/false statements)	Listening to a conversation between two employees (multiple choice questions); Completing a conversation	Acting out a dialogue between two employees	Filling in an email	
			Book 2			
2	Programming languages	Reading a letter from the head of a computer programming department to her boss (multiple choice questions)	Listening to a conversation between a programmer and a manager (true/false statements); Completing a conversation	Acting out a dialogue between a programmer and a manager	Writing an email to a manager asking for updated resources	

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	1	Types of Computers	Reading a magazine article (multiple choice questions)	Listening to a conversation between an employee and co-worker (true/false statements); Completing a conversation	Acting out a dialogue between an office employee and co-worker	Completing a computer request form	
	2	Monitors	Reading an article (multiple choice questions)	Listening to a conversation between a store clerk and a customer (true false statements); Completing a conversation	Acting out a dialogue between a store clerk and a customer	Completing a description of a computer monitor	
	3	Keyboards	Reading a blog post (completing a table)	Listening to a conversation between two employees (true/false statements);	Acting out a dialogue between two employees	Completing a note	

				Completing a conversation			
	4	Mice	Reading a product listing (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between an employee and a co-worker	Completing a product feedback form for a new mouse	
	5	Inside the Computer	Reading a magazine article (multiple choice questions)	Listening to a conversation between a computer store employee and a customer (true/false statements); Completing a conversation	Acting out a dialogue between a computer store employee and a customer	Completing a customer survey	
	12	E-mail 1	Reading an article (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing instructions about finding an e-mail	

	13	E-mail 2	Reading an e-mail (true/false statements)	Listening to a conversation between a manager and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Writing an e-mail to an employee about e-mail security
	14	E-mail 3	Reading an article (multiple choice questions)	Listening to a conversation between a computer technician and an office employee (true/false statements); Completing a conversation	Acting out a dialogue between a computer technician and an office employee	Completing a feedback form
				Book 2		
	1	Word Processing: Uses	Reading a guide (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing a customer survey

	2	Word Processing: Actions	Reading a manual (multiple choice questions)	Listening to a conversation between an employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an employee and a manager	Completing an email	
	3	Word Processing: Formatting	Reading a memo (multiple choice questions)	Listening to a conversation between two employees (listening for specific information); Completing a conversation	Acting out a dialogue between two employees	Completing an email	
Book 3							
	1	Operating Systems 1	Reading a letter (true/false statements)	Listening to a conversation between an IT employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an IT employee and a manager	Writing an e-mail about operating systems	

GRADE 10

Description of module content and learning objectives

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| Module objectives 10th grade Module 1 Focus on vocabulary Use of terminology in the foreign language | The module is skill-oriented and emphasizes on developing and consolidating practical skills in a variety of relevant work-related contexts. It focuses both on fluency in language use as well as on accuracy. Students learn and practice **how to**: General linguistic range • Use some simple structures correctly but still systematically makes basic mistakes
• Pronounce words and phrases generally clear enough to be understood but still has a strong influence on stress, rhythm and intonation from the other language spoken
• Clearly pronounce familiar words although repetition is needed from time to time
• produce sounds in the target language if carefully guided. It may affect intelligibility, requiring collaboration from interlocutors.
• Use effectively and close to independently a repertoire of basic language which enables them to deal with everyday situations with predictable
• Convey very basic content, though they will generally have to compromise the message and search for words/signs. Vocabulary range • effectively apply and make use of a basic vocabulary repertoire of words/signs and phrases related to particular concrete situations.
• Use sufficient vocabulary for the expression of basic communicative needs.
• Use sufficient vocabulary for coping with simple survival needs. |

	Grammatical accuracy • employ very simple principles of word/sign order in short statements. Shows only limited control of a few simple grammatical structures and sentence patterns in a learnt repertoire. • Use some simple structures correctly, but still systematically makes basic mistakes; nevertheless, it is usually clear what they are trying to say. Vocabulary control • control a narrow repertoire dealing with concrete, everyday needs and in professional context • Clearly pronounce enough to be understood, but conversational partners will need to ask for repetition from time to time. • Can deal with situations affected by a strong influence by the other language(s) they speak on stress, rhythm and intonation, requiring collaboration from interlocutors. • Demonstrate an intelligible pronunciation when communicating in simple everyday situations, provided the interlocutor makes an effort to understand specific sounds. • Communicate with the interlocutor when systematic mispronunciation of phonemes might hinder intelligibility, provided the interlocutor makes an effort to recognise and adjust to the influence of the speaker's language background on pronunciation. • use the rhythm and intonation of everyday words and phrases intelligibly, in spite of a strong influence on stress, intonation and/or rhythm from the other language(s) they speak.
Module 2 Professional communication in the foreign language	Students learn and practice **how to** Interact with colleagues or customers generally and more specifically for the level **how to**: Verbally • Can make and respond to invitations, suggestions, apologies, etc. using learnt phrases and memorized exchanges • Can handle very short social exchanges, using everyday polite forms of greeting and address

- Can expand learnt phrases through simple recombination of their elements   - Can ask for attention   - adapt well-rehearsed, memorised, simple phrases to particular circumstances through limited lexical substitution and difficulties in articulating less familiar words is usual.   - Can expand learnt phrases through simple recombinations of their elements.   - Can use simple techniques to start, maintain or close a short conversation.   - Can give an example of something in a very simple text using "like" or "for example".   - Can communicate what they want to say in a simple and direct exchange of limited information on familiar   - communicate basic information about basic professional details and needs of a concrete type in a simple way.   - communicate very basic information about professional topics in a simple way, while pausing is expected and usual to search for expressions   - manage very short, isolated, rehearsed utterances using gesture and signalled requests for help when necessary.   In Writing   - write short messages, e-mail messages, memos following a sample   - write SMSs using standard abbreviations and basic repertoire of written words and phrases   - fill in forms with details related to standards work situations   - write simple isolated phrases and sentences, which I have memorized or copied.   - write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things.   - take notes related to matters of immediate interest in work   - write simple isolated phrases and sentences, which he/she have memorized or copied.   - write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things.   - give information about matters of personal and professional relevance (e.g. likes and dislikes, family, pets) using simple words/signs and basic expressions.   - produce simple isolated phrases and sentences.   - describe in very simple language what a familiar object looks like.

Description of language skills

Level of language skills	General language skills	Professional language skills	Examples **Teaching and learning resources developing these occupational skills**
Understanding Listening **A2**	Can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Can catch the main point in short, clear,	➢ can understands phrases and expressions related to the most immediate priority in the work environment provided speech is clearly and slowly articulated ➢ can identify the topic of discussion ➢ can follow speech which is very slow and carefully articulated ➢ can understand instructions addressed carefully and slowly ➢ Can catch the main point in short, clear, simple message and announcements ➢ Can understands simple technical information, such as operating instructions for everyday equipment ➢ Can extracts the essential information from short, recorded passages dealing with predictable everyday work matters ➢ Can understand words/signs and short sentences in a simple conversation (e.g. between a customer and a salesperson in a shop), provided people communicate very slowly and very clearly. ➢ Can follow a very simple, well-structured presentation or demonstration, provided it is illustrated with slides, concrete examples or diagrams, it is delivered slowly and clearly with repetition, and the topic is familiar.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercises 5, 6 and 7 of Unit 1 Information Technology, p. 4-5 ▪ Book 1 Exercises 5, 6 and 7 of Unit 3 Inside the Computer ▪ Book 1 Exercises 5, 6 and 7 of Unit 4 Computing Devices ▪ Book 1 Exercises 5, 6 and 7 of Unit 10 Images and Graphic Design, p. 22-23 ▪ Book 1 Exercises 5, 6 and 7 of Unit 11 Databases vs Spreadsheets ▪ Book 1 Exercises 5, 6 and 7 of Unit 12 Web Design vs Web Development, p. 26-27 ▪ Book 1 Exercises 5, 6 and 7 of Unit 13 Desktop Publishing, p. 28-29 ▪ Book 2 Exercises 5, 6 and 7 of Unit 1 Computer Memory, p. 4-5 ▪ Book 2 Exercises 5, 6 and 7 of Unit 2 Programming Languages, p. 6-7 (Revision from 9th grade) ▪ Book 3 Exercises 5, 6 and 7 of Unit 1 Macs and PCs, p. 4-5 ▪ Book 3 Exercises 5, 6 and 7 of Unit 2 Linux, p. 6-7

simple messages and announcements.	➢ Can understand the outline of simple information given in a predictable situation, such as on a guided tour of work environment (e.g. "This is where the master works"). ➢ Can understand simple directions on how to get from X to Y, by foot or public transport. ➢ Can understand basic instructions on times, dates and numbers, etc., and on routine tasks and assignments to be carried out. ➢ Can understand straightforward announcements (e.g. of a cinema programme or sports event, that a train has been delayed), provided the delivery is slow and clear. ➢ Can pick out concrete information (e.g. places and times) from short recordings on familiar everyday topics, provided they are delivered very slowly and clearly.	▪ Listening for specific occupation related information with a focus on vocabulary) very basic repertoire of words and simple phrases related to the topic) From Computing, Express Publishing ▪ Book 1, Exercises 5, 6 and 7 of Unit 1 types of Computers ▪ Book 1, Exercises 5, 6 and 7 of Unit 2 Monitors ▪ Book 1, Exercises 5, 6 and 7 of Unit 5 Inside the Computer ▪ Book 1, Exercises 5, 6 and 7 of Unit 6 Data Storage Devices ▪ Book 1, Exercises 5, 6 and 7 of Unit 7 Printers ▪ Book 2, Exercises 5, 6 and 7 of Unit 4 Spreadsheets: Uses, p. 10-11 ▪ Book 2, Exercises 5, 6 and 7 of Unit 5 Spreadsheets: Actions, p. 12-13 ▪ Book 2, Exercises 5, 6 and 7 of Unit 6 Spreadsheets: Formatting, p. 14-15 ▪ Book 2, Exercises 5, 6 and 7 of Unit 9 Image and Design 1, p. 20-21 ▪ Book 2, Exercises 5, 6 and 7 of Unit 10 Image and Design 2, p. 22-23 ▪ Book 2, Exercises 5, 6 and 7 of Unit 11 Web Design and Web Development ▪ Book 2, Exercises 5, 6 and 7 of Unit 12 Web Browsing: Parts, p. 26-27

| | | | ▪ Book 2, Exercises 5, 6 and 7 of Unit 13 Web Browsing: Actions, p. 28-29
▪ Book 3, Exercises 5, 6 and 7 of Unit 1 Operating Systems, p. 4-5 (Revision from 9th grade)

From Electronics, Express Publishing

▪ Book 1 Exercises 5, 6 and 7 of Unit 6 Soldering Tools
▪ Book 1 Exercises 5, 6 and 7 of Unit 2 Electricity Basics
▪ Book 1 Exercises 5, 6 and 7 of Unit 3 Electricity Basics
▪ Book 2 Exercises 5, 6 and 7 of Unit 4 Circuits
▪ Book 2 Exercises 5, 6 and 7 of Unit 14 Transistors
▪ Book 3 Exercises 5, 6 and 7 of Unit 1 Diagrams
▪ Book 3 Exercises 5, 6 and 7 of Unit 6 Power Supply

Tasks developed by the teacher

▪ Guidelines for construction of tasks |
| Reading **A1+ to A2** | Can read very short, simple texts. Can find specific, predictable information in simple everyday material such | ➢ can read and extract the necessary information related to working environment and the occupation.
➢ can extract the important information and main points from short specialised texts, manuals, orders, instructions, etc.
➢ can get a general understanding of an occupation-specific text.

➢ Can understand very simple formal e-mails and letters (e.g. confirmation of a booking or online purchase). | From Information Technology, Express Publishing, 2022

▪ Book 1 Exercises 2, 3 and 4 of Unit 1 Information Technology, p. 4-5
▪ Book 1 Exercises 2, 3 and 4 of Unit 3 Inside the Computer
▪ Book 1 Exercises 2, 3 and 4 of Unit 4 Computing Devices
▪ Book 1 Exercises 2, 3 and 4 of Unit 10 Images and Graphic Design, p. 22-23 |

	as advertisements, prospectuses, menus and timetables and can understand short simple personal letters.	➢ Can understand everyday signs and notices, etc. in public places, such as streets, restaurants, railway stations; in workplaces, such as directions, instructions, hazard warnings. ➢ Can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus, reference lists and timetables. ➢ Can locate specific information in lists and isolate the information required (e.g. use catalogues to find a service or tradesman). ➢ Can understand texts describing people, places, everyday life and work environment, etc., provided they use simple language. ➢ Can understand information given in illustrated brochures and maps (e.g. the principal attractions of a city). ➢ Can understand a short factual description or report within their own field, provided simple language is used and that it does not contain unpredictable detail. ➢ Can understand simple, brief instructions, provided they are illustrated and not presented in continuous text.	▪ Book 1 Exercises 2, 3 and 4 of Unit 11 Databases vs Spreadsheets ▪ Book 1 Exercises 2, 3 and 4 of Unit 12 Web Design vs Web Development, p. 26-27 ▪ Book 1 Exercises 2, 3 and 4 of Unit 13 Desktop Publishing, p. 28-29 ▪ Book 2 Exercises 2, 3 and 4 of Unit 1 Computer Memory, p. 4-5 ▪ Book 2 Exercises 2, 3 and 4 of Unit 2 Programming Languages, p. 6-7 (Revision from 9th grade) ▪ Book 3 Exercises 2, 3 and 4 of Unit 1 Macs and PCs, p. 4-5 ▪ Book 3 Exercises 2, 3 and 4 of Unit 2 Linux, p. 6-7 ▪ Listening for specific occupation related information with a focus on vocabulary) very basic repertoire of words and simple phrases related to the topic) From Computing, Express Publishing ▪ Book 1, Exercises 2, 3 and 4 of Unit 1 types of Computers ▪ Book 1, Exercises 2, 3 and 4 of Unit 2 Monitors ▪ Book 1, Exercises 2, 3 and 4 of Unit 5 Inside the Computer ▪ Book 1, Exercises 2, 3 and 4 of Unit 6 Data Storage Devices ▪ Book 1, Exercises 2, 3 and 4 of Unit 7 Printers

- Book 2, Exercises 2, 3 and 4 of Unit 4 Spreadsheets: Uses, p. 10-11
- Book 2, Exercises 2, 3 and 4 of Unit 5 Spreadsheets: Actions, p. 12-13
- Book 2, Exercises 2, 3 and 4 of Unit 6 Spreadsheets: Formatting, p. 14-15
- Book 2, Exercises 2, 3 and 4 of Unit 9 Image and Design 1, p. 20-21
- Book 2, Exercises 2, 3 and 4 of Unit 10 Image and Design 2, p. 22-23
- Book 2, Exercises 2, 3 and 4 of Unit 11 Web Design and Web Development
- Book 2, Exercises 2, 3 and 4 of Unit 12 Web Browsing: Parts, p. 26-27
- Book 2, Exercises 2, 3 and 4 of Unit 13 Web Browsing: Actions, p. 28-29
- Book 3, Exercises 2, 3 and 4 of Unit 1 Operating Systems, p. 4-5 (Revision from 9th grade)

From Electronics, Express Publishing

- Book 1 Exercises 2, 3 and 4 of Unit 6 Soldering Tools
- Book 1 Exercises 2, 3 and 4 of Unit 2 Electricity Basics
- Book 1 Exercises 2, 3 and 4 of Unit 3 Electricity Basics 2
- Book 2 Exercises 2, 3 and 4 of Unit 4 Circuits
- Book 2 Exercises 2, 3 and 4 of Unit 14 Transistors
- Book 3 Exercises 2, 3 and 4 of Unit 1 Diagrams
- Book 3 Exercises 2, 3 and 4 of Unit 6 Power Supply

			Vocabulary focus (please see the glossaries to the relevant Books and the listed terms under each of the Units, e.g. under Book 1 Unit 2 Electricity Basics the targeted vocabulary is the following: 'ampere, charge, circuit, conduct, current, electricity, electron, ohm, resistance, volt, watt' (See listing proposed relevant vocabulary in accordance with the developed curriculum for the occupation) Tasks developed by the teacher using the Glossaries as part of the proposed textbooks See also Guidelines for construction of tasks (as part of the proposed methodology)
Speaking Spoken interaction **A1+ to A2**	Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. Can handle very short social exchanges,	➢ can exchange information on a variety of simple and routine matters directly related to the immediate work environment. ➢ can ask questions, confirm information and avoid misunderstanding ➢ can handle a simple conversation in order to obtain goods and services ➢ can handle simple social exchanges with customers/colleagues, e.g. introductions, invitations, apologies. ➢ can ask and answer simple questions about someone's preferences, requests, purchases and orders. ➢ Can interact in a simple way but communication is totally dependent on repetition at a slower rate, rephrasing and repair.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercises 1, 7 and 8 of Unit 1 Information Technology, p. 4-5 ▪ Book 1 Exercises 1, 7 and 8 of Unit 3 Inside the Computer ▪ Book 1 Exercises 1, 7 and 8 of Unit 4 Computing Devices ▪ Book 1 Exercises 1, 7 and 8 of Unit 10 Images and Graphic Design, p. 22-23 ▪ Book 1 Exercises 1, 7 and 8 of Unit 11 Databases vs Spreadsheets ▪ Book 1 Exercises 1, 7 and 8 of Unit 12 Web Design vs Web Development, p. 26-27 ▪ Book 1 Exercises 1, 7 and 8 of Unit 13 Desktop Publishing, p. 28-29

even though cannot usually understand enough to keep the conversation going myself.	➢ Can ask and answer simple questions, initiate and respond to simple statements in areas of immediate need or on very familiar topics.	▪ Book 2 Exercises 1, 7 and 8 of Unit 1 Computer Memory, p. 4-5 ▪ Book 2 Exercises 1, 7 and 8 of Unit 2 Programming Languages, p. 6-7 (Revision from 9th grade) ▪ Book 3 Exercises 1, 7 and 8 of Unit 1 Macs and PCs, p. 4-5 ▪ Book 3 Exercises 1, 7 and 8 of Unit 2 Linux, p. 6-7
	➢ Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions.	
	➢ Can understand what is said clearly, slowly and directly to them in simple everyday conversation; can be made to understand, if the interlocutor can take the trouble.	▪ Listening for specific occupation related information with a focus on vocabulary) very basic repertoire of words and simple phrases related to the topic)
	➢ Can understand everyday expressions aimed at the satisfaction of simple needs of a concrete type, delivered directly to them in clear, slow and repeated language by a sympathetic interlocutor. ➢ Can take part in a simple conversation of a basic factual nature on a predictable topic (e.g. their home country, job, school).	From Computing, Express Publishing ▪ Book 1, Exercises 1, 7 and 8 of Unit 1 types of Computers ▪ Book 1, Exercises 1, 7 and 8 of Unit 2 Monitors ▪ Book 1, Exercises 1, 7 and 8 of Unit 5 Inside the Computer ▪ Book 1, Exercises 1, 7 and 8 of Unit 6 Data Storage Devices ▪ Book 1, Exercises 1, 7 and 8 of Unit 7 Printers
	➢ Can ask for and provide everyday goods and services. ➢ Can give and receive information about quantities, numbers, prices, etc. ➢ Can make simple purchases by stating what is wanted and asking the price.	▪ Book 2, Exercises 1, 7 and 8 of Unit 4 Spreadsheets: Uses, p. 10-11 ▪ Book 2, Exercises 1, 7 and 8 of Unit 5 Spreadsheets: Actions, p. 12-13 ▪ Book 2, Exercises 1, 7 and 8 of Unit 6 Spreadsheets: Formatting, p. 14-15

		➢ Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions. ➢ Can ask and answer simple questions, initiate and respond to simple statements in areas of immediate need or on very familiar topics. ➢ can ask and answer questions about my own area of work using simple language. ➢ can ask for and give directions referring to a map or plan. ➢ can discuss in a very simple way events, activities and plans. ➢ can take simple telephone calls or put callers through. ➢ can make arrangements concerning meeting points/date/time/arrival and departure, when simple language is used.	▪ Book 2, Exercises 1, 7 and 8 of Unit 9 Image and Design 1, p. 20-21 ▪ Book 2, Exercises 1, 7 and 8 of Unit 10 Image and Design 2, p. 22-23 ▪ Book 2, Exercises 1, 7 and 8 of Unit 11 Web Design and Web Development ▪ Book 2, Exercises 1, 7 and 8 of Unit 12 Web Browsing: Parts, p. 26-27 ▪ Book 2, Exercises 1, 7 and 8 of Unit 13 Web Browsing: Actions, p. 28-29 ▪ Book 3, Exercises 1, 7 and 8 of Unit 1 Operating Systems, p. 4-5 (Revision from 9th grade) From Electronics, Express Publishing ▪ Book 1 Exercises 1, 7 and 8 of Unit 6 Soldering Tools ▪ Book 1 Exercises 1, 7 and 8 of Unit 2 Electricity Basics ▪ Book 1 Exercises 1, 7 and 8 of Unit 3 Electricity Basics 2 ▪ Book 2 Exercises 1, 7 and 8 of Unit 4 Circuits ▪ Book 2 Exercises 1, 7 and 8 of Unit 14 Transistors ▪ Book 3 Exercises 1, 7 and 8 of Unit 1 Diagrams ▪ Book 3 Exercises 1, 7 and 8 of Unit 6 Power Supply Tips for teachers: ▪ Use simple, basic, short texts (proposed in the Teacher's Book or developed individually by the teacher for Exercise 1; you can use visuals, is the targeted vocabulary allows, use a diagram, plan or a map; construct simple sentences intended as part of a

			simple conversation in order to obtain goods and services; you can present a simple social exchange and they role play it with a student) ▪ Speaking and interacting with a partner on job-specific topics (very basic repertoire of words and simple phrases related to the topic) ▪ Role play (in pairs) getting someone's attention, giving instructions, indicating a course of actions, making suggestions, identifying a problem, checking for errors, expressing confusion, making comparison, asking about knowledge, making a recommendation, describing a problem, etc. ▪ Example: practice a conversation about a problem with a purchase as in Unit 14 of Book 2 from Electronics, Express Publishing (there is a model conversation, which students can first read, then try to act as it is and after than act after introducing small changes mostly in use of vocabulary) Tasks developed by the teacher ▪ Guidelines for construction of tasks
Spoken production **A1+**	I can use simple phrases and sentences to describe where I live	➢ can describe myself and my environment, using simple language. ➢ can give a simple account of my work place, my job or company. ➢ can produce simple mainly isolated phrases about people and places related to my occupation. ➢ can read a very short, rehearsed statement – e.g. to introduce a person, propose a product.	Oral production (speaking) activities: ▪ The language user produces an oral text which is received by an audience of one or more listeners. ▪ Examples: reading a written text aloud, speaking from notes or visual aids (diagram, pictures, charts, etc.) ▪ Acting out a rehearsed role See above exercises for speaking interaction: ▪ Distribute role cards – students read their role cards

	and people I know. ↓ Can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	➢ Can give a simple description or presentation of people, living or working conditions, daily routines. likes/ dislikes, etc. as a short series of simple phrases and sentences linked into a list. ➢ Can describe themselves, what they do and where they live. ➢ Can describe simple aspects of their everyday life in a series of simple sentences, using simple words/signs and basic phrases, provided they can prepare in advance. ➢ Can name an object and indicate its shape and colour while showing it to others using basic words/signs, phrases and formulaic expressions, provided they can prepare in advance. ➢ Can use a very short prepared text to deliver a rehearsed statement (e.g. to formally introduce someone, to propose a toast).	▪ Write a diagram of the role play words/sentences on the board
Writing A1+	Can produce simple isolated	• can write short letters, messages, e-mail messages, memos following a sample • can write SMSs using standard abbreviations. • can take notes related to matters of immediate interest in work • can fill in forms with personal details (job, age, address, etc.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercise 9 of Unit 1 Information Technology, p. 4-5 ▪ Book 1 Exercise 9 of Unit 3 Inside the Computer ▪ Book 1 Exercise 9 of Unit 4 Computing Devices

		phrases and sentences.	• can write simple isolated phrases and sentences, which I have memorized or copied. • can write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things.	▪ Book 1 Exercise 9 of Unit 10 Images and Graphic Design, p. 22-23 ▪ Book 1 Exercise 9 of Unit 11 Databases vs Spreadsheets ▪ Book 1 Exercise 9 of Unit 12 Web Design vs Web Development, p. 26-27 ▪ Book 1 Exercise 9 of Unit 13 Desktop Publishing, p. 28-29
		Can produce a series of simple phrases and sentences linked with simple connectors like "and", "but" and "because".	➢ Can give information about matters of personal relevance (e.g. likes and dislikes, family, pets) using simple words/signs and basic expressions. ➢ Can produce simple isolated phrases and sentences. ➢ Can describe in very simple language what a room (or a familiar object) looks like.	▪ Book 2 Exercise 9 of Unit 1 Computer Memory, p. 4-5 ▪ Book 2 Exercise 9 of Unit 2 Programming Languages, p. 6-7 (Revision from 9th grade) ▪ Book 3 Exercise 9 of Unit 1 Macs and PCs, p. 4-5 ▪ Book 3 Exercise 9 of Unit 2 Linux, p. 6-7 From Computing, Express Publishing ▪ Book 1, Exercise 9 of Unit 1 types of Computers ▪ Book 1, Exercise 9 of Unit 2 Monitors ▪ Book 1, Exercise 9 of Unit 5 Inside the Computer ▪ Book 1, Exercise 9 of Unit 6 Data Storage Devices ▪ Book 1, Exercise 9 of Unit 7 Printers ▪ Book 2, Exercise 9 of Unit 4 Spreadsheets: Uses, p. 10-11 ▪ Book 2, Exercise 9 of Unit 5 Spreadsheets: Actions, p. 12-13 ▪ Book 2, Exercise 9 of Unit 6 Spreadsheets: Formatting, p. 14-15 ▪ Book 2, Exercise 9 of Unit 9 Image and Design 1, p. 20-21 ▪ Book 2, Exercise 9 of Unit 10 Image and Design 2, p. 22-23

			▪ Book 2, Exercise 9 of Unit 11 Web Design and Web Development ▪ Book 2, Exercise 9 of Unit 12 Web Browsing: Parts, p. 26-27 ▪ Book 2, Exercise 9 of Unit 13 Web Browsing: Actions, p. 28-29 ▪ Book 3, Exercise 9 of Unit 1 Operating Systems, p. 4-5 (Revision from 9th grade) From Electronics, Express Publishing ▪ Book 1 Exercise 9 of Unit 6 Soldering Tools ▪ Book 1 Exercise 9 of Unit 2 Electricity Basics ▪ Book 1 Exercise 9 of Unit 3 Electricity Basics 2 ▪ Book 2 Exercise 9 of Unit 4 Circuits ▪ Book 2 Exercise 9 of Unit 14 Transistors ▪ Book 3 Exercise 9 of Unit 1 Diagrams ▪ Book 3 Exercise 9 of Unit 6 Power Supply Tasks developed by the teacher ▪ Guidelines for construction of tasks

Teaching/learning contents (guide lines) - Computer technical services, 10th grade

2 teaching hours per week

Topics from the Curriculum Package Computer Technical Services and Operation Technician	Resources (See examples of appropriate resources)	Comments Linguistic aspects/teaching and learning methods
SYSTEM MAINTENANCE AND REPAIR Motherboards and cases Processors	From Information Technology, Express Publishing, 2022 Book 1 Unit 3 Inside the Computer, p. 8-9 (revision of the unit studies in 9th grade and including additional materials. For example, online materials What is a motherboard? https://www.techtarget.com/whatis/definition/motherboard; video presentation useful for designing tasks - https://youtu.be/_2MB8F9JSa8) From Computing, Express Publishing, 2022 Book 1	

	Unit 5 Inside the Computer, p. 12-13 (revision of the unit studies in 9th grade and including additional materials. It is recommended to have accessible online materials for designing of 2-3 additional tasks) From Computing, Express Publishing, 2022	
Memory units Disk Drives Hardware cards	Book 1 Unit 6 Data Storage Devices, p. 14-15 From Computing, Express Publishing, 2022	
Monitors	Book 1 Unit 2 Monitors, p. 6-7 (revision of the unit studies in 9th grade and including additional materials. It is recommended to have accessible online materials for designing of 2-3 additional tasks) From Information Technology, Express Publishing, 2022 Book 1 Unit 4 Computing Devices, p. 10-11 From Computing, Express Publishing, 2022	

Printers	Book 1 Unit 7 Printers, p. 16-17	
	From Computing, Express Publishing, 2022	
Tablets and laptops	Book 1 Unit 1 Types of Computers (revision and inclusion of additional tasks)	
	From Information Technology, Express Publishing, 2022	
	Book 1 Unit 11 databases vs Spreadsheets, p. 24-25 (including 2-3 additional tasks)	
	From Computing, Express Publishing, 2022	
	Book 2	
	Unit 4, 5 and 6 Spreadsheets: uses, actions, formatting, p. 10-16	
	From Information Technology, Express Publishing, 2022	
	Book 3	
	Unit 1 Macs and PCs, p. 4-8	
	Unit 2 Linux, p. 9-10	
	Unit 10 Antivirus Software, p. 22-24	

	Vocational Foreign Language version, Department of Information Technologies, 11-12 course material, by **Dr. Selçuk Yusuf ARSLAN, Çiğdem TUFAN TUĞCU and Hülya ÖZKAN** Unit 2.2. Software, p. 60-64	
PYTHON	Vocational Foreign Language version, Department of Information Technologies, 11-12 course material, by **Dr. Selçuk Yusuf ARSLAN, Çiğdem TUFAN TUĞCU andHülya ÖZKAN** Unit 2.1. Basic Programming Concepts, p. 79-86 Re: previous topic (Tips: You can discuss with the ICT teacher what is best to use for tis topic. It is suggested to use available online PowerPoint presentation for designing some specific tasks. For example, https://www.slideshare.net/sujithkumar9212301/introduction-to-python-36647807, https://slideplayer.com/slide/13549208/, videos; you can also devise exercises for orientation and search on websites https://www.python.org/downloads/; it is a good opportunity to consider issues related to digital literacy, safe internet and identification of reliable online sources	
BASIC ELECTROCNICS AND MEASUREMENTS Technical drawing	From Electronics, Express Publishing, 2022 Book 3 Unit 1 Diagrams, p. 4-6 From Electronics, Express Publishing, 2022	

Direct and Alternating Current Circuits	Book 1 Unit 2 Electricity Basics, p. 6-7	
	Book 1 Unit 3 Electricity Basics 2, p. 8-9	
Analog circuit elements	Book 2 Unit 4 Circuits, p. 10-12	
Transistors and FET	From Electronics, Express Publishing, 2022	
	Book 2 Unit 14 Transistors, p. 30-32	
Soldering and Printed Circuits	From Electronics, Express Publishing, 2022	
	Book 1 Unit 6 Soldering tools, p. 14-16	
Power supply	From Electronics, Express Publishing, 2022	
	Book 3 Unit 6 Power supply, p. 14-16	
PROGRAMMING	Information Technology, Express Publishing, 2022	
	Book 3 Unit 15 Programming, p. 34-35	

Assessment:

- Self-assessment: According to the scale in the self-assessment grid of the Common European Framework (CEF)
- Tutor assessment: Tests, quizzes, case studies, simulations, role plays
- Final assessment: Test, case study

Recommended learning time:

- 60 hours face to face learning
- 60 hours individual learning

Teaching/learning contents (guide lines) - Software and web operations, 10th grade

2 teaching hours per week

TOPIC/ CONTEXT Topics from the *Curriculum Package* **Programming and web operations**	*Resources* See examples of appropriate resources	*Teaching and learning focus and methods* *Linguistic aspects/teaching and learning methods*
PROGRAMMING	Computing, Express Publishing, 2022 Book 3 Unit 1 Operating Systems, p. 4-5 (Revision from 9th grade) From Information Technology, Express Publishing, 2022 Book 1 Unit 13 Desktop Publishing, p. 28-29 Book 2 Unit 1 Computer Memory, p. 4-5 From Information Technology, Express Publishing, 2022 Book 3 Unit 1 Macs and PCs, p. 4-5	

	Book 3 Unit 2 Linux, p. 6-7	
	From Information Technology, Express Publishing, 2022 Book 1, Unit 1 Information Technology, p. 4-5	
JAVA	From Information Technology, Express Publishing, 2022 Book 2, Unit 2 Programming Languages, p. 6-7 (Revision from 9th grade)	
DATABASE	From Information Technology, Express Publishing, 2022 Book 1 Unit 11 Databases and Spreadsheets, p. 24-25 From Computing, Express Publishing, 2022 Book 2 Unit 4 Spreadsheets: Uses, p. 10-11 Book 2 Unit 5 Spreadsheets: Actions, p. 12-13 Book 2 Unit 6 Spreadsheets: Formatting, p. 14-15	
WEB DESIGN	From Information Technology, Express Publishing, 2022	

	Book 1 Unit 12 Web Design vs Web Development, p. 26-27	
	Book 1 Unit 10 Images and Graphic Design, p. 22-23	
	Computing, Express Publishing, 2022	
	Book 2 Unit 9 Image and Design 1, p. 20-21	
	Book 2 Unit 10 Image and Design 2, p. 22-23	
	Book 2 Unit 11 Web Design and Web Development	
	Book 2 Unit 12 Web Browsing: Parts, p. 26-27	
	Book 2 Unit 13 Web Browsing: Actions, p. 28-29	

Assessment:

- ➢ <u>Self-assessment</u>: According to the scale in the self-assessment grid of the Common European Framework (CEF)
- ➢ <u>Tutor assessment</u>: Tests, quizzes, case studies, simulations, role plays
- ➢ <u>Final assessment:</u> Test, case study

Recommended learning time:

- ➢ 60 hours face to face learning
- ➢ 60 hours individual learning

Vocabulary focus for reading and listening comprehension

Getting Started provides warm-up questions about the chapter topic. The questions' main purpose is to activate students' prior knowledge about the topic before they read the passage or listen to the audio file. The 'Get Ready!' exercise includes suggestions of questions that can serve this function. The teachers can also ask additional questions related to the school and occupational environment to activate students' prior knowledge.

Target words (terms)

Each unit introducing target words and asks students to assess their knowledge of each word both before and after they work through the chapter. Vocabulary learning is incremental (gradual, step-by step). Revision is required at least 3-4 times during the school year in various contexts. Even if students do not achieve productive mastery of every word by the time the chapter is finished, the process can show partial improvement (for example, from *no knowledge* to *receptive knowledge*). By avoiding a *no knowledge / full mastery dichotomy*, the process can show smaller degrees of learning. We would expect every student to learn enough about the target words to show some improvement, which should maintain and enhance their motivation.

Reading presents a reading passage that has been graded in various levels of difficulty. The embedding of the target vocabulary in these texts ensures that it is not introduced in isolation, but in meaningful contexts. There is also a great deal of target vocabulary in these texts that is not specifically focused on in the chapter, and that provides natural recycling in new contexts of words students have already studied.

In addition, the passages are suitable for a wide range of reading-based tasks that can be constructed by the teacher to ensure mastering of target words. This integration of reading and vocabulary allows the study of lexis in programs that have a reading focus, and promotes the beneficial concurrent improvement of reading and vocabulary skills. For example, at the end of each passage, there are exercises (Reading Comprehension) that focus on comprehension ranging from literal details, recognition o true/false, matching of terms with definitions and filling gaps with targeted words.

Focusing on Vocabulary means:

• Word Meaning features a variety of exercises designed to help students learn the meaning of each of the twenty-four target words.

• Word Families provides practice in recognizing and using the various derivative word forms that make up a word's family (or words of the same category).

• Collocation exercises are designed to improve students' intuitions about the collocations a word takes (mouse, LED mouse, laser mouse, ball mouse).

Vocabulary Learning Strategies

To learn target words well, students will need to continue meeting and learning these word families outside of this book. This means you will need to use vocabulary strategies to maximize your learning. Below, we describe a number of these vocabulary learning strategies.

USING A DICTIONARY
One of the most important reasons to use a dictionary is to discover a word's meaning. However, many words have more than one meaning, and you must be careful to choose the one that matches the context.

③ Match the words or phrases (1-8) with the definitions (A-H).

1 ___ Mac		5 ___ hardware	
2 ___ Windows		6 ___ software compatible	
3 ___ macOS		7 ___ processing speed	
4 ___ Linux		8 ___ vulnerable	

A a computing device
B being able to run different programs
C an operating system developed by Apple
D an operating system that uses open source software
E a measure of how fast a computer operates
F an operating system developed by Microsoft
G a computer developed by Apple
H open to attack

Teachers can design similar tasks using a dictionary or the glossary to the teaching and learning resources as part of this package.

GUESSING FROM CONTEXT

Guessing the meaning of a new word from context is a very good way to supplement the learning of vocabulary from a book like this. You can get clues from the surrounding words and the construction of the sentences.

Teachers can use short texts for guessing from context. The teachers can ask questions such as:

What is the meaning of ……..?
What are the clues that helped you discover this meaning?
How could this help you understand the meaning of ……….?

EXTENSIVE READING

Although students gain a lot of benefits from studying words, they also need to see or hear them in many contexts to understand how to use them appropriately. One of the best ways to gain this wide exposure is to read extensively. The repeated exposure to words in reading will help students remember their spellings and meanings, and will also show the other words they commonly occur with. In other words, by reading widely, you will eventually begin to get a feel for which words collocate with the words you are learning.

USING INTERNET TOOLS

Nowadays, there are many Internet sites that can help your learning. Teachers can use internet sources for allowing for extensive reading and seeing target words in many contexts to understand how to use them appropriately.

Guide to Vocabulary Focus Approach - Computer technical services, 10th grade

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments **Additionl target words**
				Book 1	
	3	Inside the computer	Reading a technology guide about computer assembly (multiple choice questions)	case, disk drive, expansion card, fan, hard drive, heat sink, motherboard, power supply, processor, RAM	
	4	Computing devices	Reading an advertisement from a computer parts catalogue (true/false statements)	input device, keyboard, LCD, microphone, monitor, mouse, peripheral, printer, scanner, scroll wheel, touchscreen, USB	
	11	Databases vs. spreadsheets	Reading an email from an IT department	cell, database, database field, formula, function, operator,	

			(reading for specific information)	query, sort, spreadsheet, table, worksheet	
Book 3					
	1	Macs and PCs	Reading a computer magazine article (true/false statements)	Apple®, color matching, customize, Mac®, Microsoft®, OS X®, PC, prepress, processing speed, typography, video subsystem, Windows®	
	2	Linux	Reading an email from an IT employee to a manager (multiple choice questions)	command line, free software license, Linux®, Linux® distribution, Microsoft Office®, open source, OpenOffice®, Samba®, TCP/IP protocol, terminal, Ubuntu®, vendor	
	7	Hackers and viruses	Reading a newspaper article (multiple choice questions)	anti-antivirus virus, hacker, host computer, imbed, infect, log in, overwriting virus, piggybacking, replicate, resident extension, resident virus, virus	
	10	Anti-virus software	Reading an anti-virus software advertisement (multiple choice questions)	backup, block, cyber criminal, detect, false negative, false positive, quarantine, rootkit, security software, sweep, virus removal software, webpage analysis	

| | 15 | Programming | Reading advertisements for programming jobs (multiple choice questions) | back end, component, editor, interactive, PHP, programmer, script, user-friendly, Visual Basic, web developer, XML | |

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments /Additional target words
				Book 1	
	1	Types of Computers	Reading a magazine article (multiple choice questions)	computer, desktop computer, laptop, notebook, personal computer, portable, processing power, server, tablet, workstation	
	2	Monitors	Reading an article (multiple choice questions)	aspect ratio, contrast, display, HD, LCD, LED, monitor, resolution, response time, screen	
	5	Inside the Computer	Reading a magazine article (multiple choice questions)	case, CPU, disk drive, fan, hard drive, heat sink, motherboard, optical drive, port, power supply, processor, removable drive, USB port	

	6	Data Storage Devices	Reading an advertisement (multiple choice questions)	capacity, flash drive, GB, memory, portable hard drive, solid state drive, SSD (Solid State Drive), TB, thumb drive	
	7	Printers	Reading an email (multiple choice questions)	cartridge, dpi (dots per inch), ink, inkjet printer, laser printer, ppm (pages per minute), print, printer, toner, two-sided	
			Book 2		
	4	Spreadsheets: Uses	Reading an email (multiple choice questions)	analyze, balance sheet, budget, data, database, equation, function, sales invoice, spreadsheet, timecard, track, workbook	
	5	Spreadsheets: Actions	Reading a webpage (multiple choice questions)	calculate, chart, clear contents, clear formats, equal sign, filter out, formula, formula bar, insert, sort, table, value	
	6	Spreadsheets: Formatting	Reading a troubleshooting guide (multiple choice questions)	border, cell, column, lock, merge, printing area, row, set, shading, shrink to fit, split, wrap	

Electronics, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments/ Additional target words
				Book 1	
	2	Electricity basics	Reading a course description (true/false statements)	ampere, charge, circuit, conduct, current, electricity, electron, ohm, resistance, volt, watt	
	3	Electricity basics 2	Reading a textbook excerpt (reading for specific information)	alternating current, capacitance, direct current, hertz, impedance, inductance, negative, polarity, positive, reactance, rectification, transformer	
	4	Tools	Reading an advice column (multiple choice questions)	diagonal cutters, electrical tape, flathead screwdriver, hammer, hemostat, hex wrench, magnifier, needlenose pliers, Phillips screwdriver, torque wrench, wire stripper	
	6	Soldering tools	Reading instructions on using a soldering iron (true/false statements)	bond, component, desoldering iron, flux, melt, remove, solder, solder sucker, solder wick, soldering iron, tip, vacuum pump	
				Book 2	

4	Circuits	Reading a course description (multiple choice questions)	active element, circuit, closed, component, leg, open, origin, parallel, rectify, reservoir, series, short circuit, shorted, stage, wire	
14	Transistors	Reading an article (reading for specific information)	amplify, base, bias, bipolar transistor, collector, depletion mode, drain, emitter, enhancement mode, gate, junction field effect transistor (JFET), metal-oxide semiconductor field-effect transistor (MOSFET), source	
			Book 3	
1	Diagrams	Reading a magazine article (multiple choice questions)	block diagram, chassis, conceptual, diagram, drawing, lay out, navigate, overall, pictorial diagram, placement, schematic diagram, section, service manual, specify	
6	Power supply	Reading a text excerpt (true/false statements)	congregate, filter, hard switch, inductor, linear power supply, microprocessor, power supply, regulation system, round, square, switching supply, toroid, voltage inverter	

Guide to Vocabulary Focus Approach - Software and web operations, 10th grade

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading		Comments
				Book 1	
	1	Information Technology	Reading a statement from a CEO (true/false statements)	code, data, data processing, encode, hardware, information security, online, quality assurance, software, technical support	
	10	Images and graphic design	Reading an article from a magazine (multiple choice questions)	contrast, crop, exposure, graphic editing program, graphics, JPEG, pixel, resize, resolution, tint	
	11	Databases vs. spreadsheets	Reading an email from an IT department (reading for specific information)	cell, database, database field, formula, function, operator, query, sort, spreadsheet, table, worksheet	
	12	Web design vs. web development	Reading an article from a business newsletter (multiple choice questions)	appearance, coding, content, CSS, functionality, navigation, usability, visibility, web design, web development	

	13	Desktop publishing	Reading a job listing for a position (multiple choice questions)	clip art, comprehensive layout, desktop publishing software, desktop publishing, electronic page, electronic paper, electrostatic printing, graphic communications, offset lithography, page layout		
				Book 2		
	1	Computer memory	Reading a troubleshooting guide (multiple choice questions)	bit, bit size, bus speed, DIMM, MB, MHz, paging file, RAM, SIMM, virtual memory		
	2	Programming languages	Reading a letter from the head of a computer programming department to her boss (multiple choice questions)	C, C#, C++, compiler, computer language, CPU, Java, JavaScript, linker, machine code, multi-thread, Python, Swift		
				Book 3		
	1	Macs and PCs	Reading a computer magazine article (true/false statements)	Apple®, color matching, customize, Mac®, Microsoft®, OS X®, PC, prepress, processing speed, typography, video subsystem, Windows®		
	2	Linux	Reading an email from an IT employee to a manager (multiple choice questions)	command line, free software license, Linux®, Linux® distribution, Micro Samba®, TCP/IP protocol, terminal, Ubuntu®, vendor		e, OpenOff

Computing 10th grade

	Unit	Topic	Reading	Vocabulary/ Target words	Comments / additional target words
				Book 2	
	4	Spreadsheets: Uses	Reading an email (multiple choice questions)	analyze, balance sheet, budget, data, database, equation, function, sales invoice, spreadsheet, timecard, track, workbook	
	5	Spreadsheets: Actions	Reading a webpage (multiple choice questions)	calculate, chart, clear contents, clear formats, equal sign, filter out, formula, formula bar, insert, sort, table, value	
	6	Spreadsheets: Formatting	Reading a troubleshooting guide (multiple choice questions)	border, cell, column, lock, merge, printing area, row, set, shading, shrink to fit, split, wrap	
	9	Image and Design 1	Reading an advice column (multiple choice questions)	blurry, design, file format, layer, lossless compression, lossy compression, photo, pixel, raster graphic, sharpening, scaling, thumbnail, vector graphic	

	10	Image and Design 2	Reading instructions (true/false statements)	blur, clone, crop, recompose, red eye, resize, retouch, sharpness, stamp, straighten, trim	
	11	Web Design and Web Development	Reading course descriptions (multiple choice questions)	appearance, coding, content, CSS, functionality, navigation, usability, visibility, web design, web development	
	12	Web Browsing: Parts	Reading a user's guide (multiple choice questions)	add-on, address bar, browser, bookmark, cookie, history, home page, search bar, tab, URL, webpage, website	
	13	Web Browsing: Actions	Reading a webpage (multiple choice questions)	bookmark, disable, download, enable, enter, hang, link, load, log in, log out, refresh	
Book 3					
	1	Operating Systems 1	Reading a letter (true/false statements)	Apple®, color matching, customize, hardware, Linux®, MacOS, Mac®, Microsoft®, OS X®, prepress, processing speed, software compatible, upgrade, vulnerable, Windows®	

Resource for distribution of the teaching/learning content - Computer technical services, 10th grade

(using the description of the teaching/learning content you can indicate when during the school year you plan to use the relevant units and exercises for developing of language skills; under comments you can indicate whether revision is needed and when)

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	3	Inside the computer	Reading a technology guide about computer assembly (multiple choice questions)	Listening to a conversation between a technology support specialist and a customer (true/false statements); Completing a conversation	Acting out a dialogue between a customer and a support specialist	Filling out a feedback form	

	4	Computing devices	Reading an advertisement from a computer parts catalogue (true/false statements)	Listening to a conversation between an employee and a business owner (listening for specific information); Completing a conversation	Acting out a dialogue between an employee and a business owner	Filling in a feedback form	
	11	Databases vs. spreadsheets	Reading an email from an IT department (reading for specific information)	Listening to a conversation between two co-workers (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing a page	
Book 3							
	1	Macs and PCs	Reading a computer magazine article (true/false statements)	Listening to a conversation between two employees at a publishing company (multiple choice questions); Completing a conversation	Acting out a dialogue between two employees	Writing an email to management	

	2	Linux	Reading an email from an IT employee to a manager (multiple choice questions)	Listening to a conversation between an IT worker and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an employee and a manager	Writing an email to the staff of a company	
	7	Hackers and viruses	Reading a newspaper article (multiple choice questions)	Listening to a conversation between an employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an employee and a manager	Writing an email to a manager	
	10	Anti-virus software	Reading an anti-virus software advertisement (multiple choice questions)	Listening to a conversation between a caller and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a caller and an employee	Writing out suggestions for a potential customer	
	15	Programming	Reading advertisements for programming jobs (multiple choice questions)	Listening to a conversation between two freelance programmers	Acting a out dialogue between two programmers	Writing an email responding to freelance job postings	

				(true/false statements); Completing a conversation			

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	1	Types of Computers	Reading a magazine article (multiple choice questions)	Listening to a conversation between an employee and co-worker (true/false statements); Completing a conversation	Acting out a dialogue between an office employee and co-worker	Completing a computer request form	
	2	Monitors	Reading an article (multiple choice questions)	Listening to a conversation between a store clerk and a customer (true false statements);	Acting out a dialogue between a store clerk and a customer	Completing a description of a computer monitor	

				Completing a conversation			
	5	Inside the Computer	Reading a magazine article (multiple choice questions)	Listening to a conversation between a computer store employee and a customer (true/false statements); Completing a conversation	Acting out a dialogue between a computer store employee and a customer	Completing a customer survey	
	6	Memory Storage Devices	Reading an advertisement (multiple choice questions)	Listening to a conversation between a store clerk and a customer (true false statements); Completing a conversation	Acting out a dialogue between a store clerk and a customer	Completing an order form	
	7	Printers	Reading an email (multiple choice questions)	Listening to a conversation between a manager and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Completing a form	

				Book 2			
	4	Spreadsheets: Uses	Reading an email (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing an IT department survey	
	5	Spreadsheets: Actions	Reading a webpage (multiple choice questions)	Listening to a conversation between a supervisor and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Completing a checklist of tasks	
	6	Spreadsheets: Formatting	Reading a troubleshooting guide (multiple choice questions)	Listening to a conversation between a manager and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Writing tips for making worksheets easier to read	

Electronics, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	2	Electricity basics	Reading a course description (true/false statements)	Listening to a conversation between a professor and a student (true/false statements); Completing a conversation	Acting out a dialogue between a student in an electronics course and a professor in an electronics course	Filling out a student's notes	
	3	Electricity basics 2	Reading a textbook excerpt (reading for specific information)	Listening to a conversation between an apprentice tech and an experienced tech (true/false statements); Completing a conversation	Acting out a dialogue between an apprentice tech and an experienced tech	Filling out an apprentice tech's notes	

	4	Tools	Reading an advice column (multiple choice questions)	Listening to a conversation between an apprentice and a professional electrician (true/false statements); Completing a conversation	Acting out a dialogue between an apprentice and a professional electrician	Making a list of advice from a professional electrician	
	6	Soldering tools	Reading instructions on using a soldering iron (true/false statements)	Listening to a conversation between a tutor and a student (true/false statements); Completing a conversation	Acting out a dialogue between a tutor and a student	Filling out a tutor's assignment	
				Book 2			
	4	Circuits	Reading a course description (multiple choice questions)	Listening to a conversation between two students (true/false statements); Completing a conversation	Acting out a dialogue between two students	Filling out a student's notes	

	14	Transistors	Reading an article (reading for specific information)	Listening to a conversation between a customer and a tech (true/false statements); Completing a conversation	Acting out a dialogue between a customer in an electronics store and a tech in an electronics store	Filling out a notice from a stereo manufacturer	
				Book 3			
	1	Diagrams	Reading a magazine article (multiple choice questions)	Listening to a conversation between two electronics techs (true/false statements); Completing a conversation	Acting out a dialogue between two electronics techs	Writing an excerpt from an article on reading electronics manuals	
	6	Power supply	Reading a text excerpt (true/false statements)	Listening to a conversation between an experienced tech and a new tech (multiple choice questions); Completing a conversation	Acting out a dialogue between an experienced tech and a new tech	Filling out a new tech's notes on power supplies	

Resource for distribution of the teaching/learning content - Software and web operations, 10th grade

(using the description of the teaching/learning content you can indicate when during the school year you plan to use the relevant units and exercises for developing of language skills; under comments you can indicate whether revision is needed and when)

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	1	Information Technology	Reading a statement from a CEO (true/false statements)	Listening to a conversation between an employee and her supervisor (multiple choice questions); Completing a conversation	Acting out a dialogue between a supervisor and an employee	Filling out a transfer request	

	10	Images and graphic design	Reading an article from a magazine (multiple choice questions)	Listening to a conversation between a customer and an IT worker (true/false statements); Completing a conversation	Acting out a dialogue between a support center worker and a customer	Completing a note	
	11	Databases vs. spreadsheets	Reading an email from an IT department (reading for specific information)	Listening to a conversation between two co-workers (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing a page	
	12	Web design vs. web development	Reading an article from a business newsletter (multiple choice questions)	Listening to a conversation between an instructor for a web development class and an employee (multiple choice questions); Completing a conversation	Acting out a dialogue between an instructor and an employee	Answering a sample test questions on web design	

	13	Desktop publishing	Reading a job listing for a position (multiple choice questions)	Listening to a conversation between a job applicant and an interviewer (true/false statements); Completing a conversation	Acting out a dialogue between an interviewer and a candidate	Completing interview notes	
				Book 2			
	1	Computer memory	Reading a troubleshooting guide (multiple choice questions)	Listening to a conversation between a customer and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a support center employee and a customer	Completing a receipt	
	2	Programming languages	Reading a letter from the head of a computer programming department to her boss (multiple choice questions)	Listening to a conversation between a programmer and a manager (true/false statements); Completing a conversation	Acting out a dialogue between a programmer and a manager	Writing an email to a manager asking for updated resources	

<table>
<tr><td colspan="7">Book 3</td></tr>
<tr>
<td></td>
<td>1</td>
<td>Macs and PCs</td>
<td>Reading a computer magazine article (true/false statements)</td>
<td>Listening to a conversation between two employees at a publishing company (multiple choice questions);

Completing a conversation</td>
<td>Acting out a dialogue between two employees</td>
<td>Writing an email to management</td>
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<td></td>
<td>2</td>
<td>Linux</td>
<td>Reading an email from an IT employee to a manager (multiple choice questions)</td>
<td>Listening to a conversation between an IT worker and a manager (true/false statements);

Completing a conversation</td>
<td>Acting out a dialogue between an employee and a manager</td>
<td>Writing an email to the staff of a company</td>
</tr>
</table>

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 2			
	4	Spreadsheets: Uses	Reading an email (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing an IT department survey	
	5	Spreadsheets: Actions	Reading a webpage (multiple choice questions)	Listening to a conversation between a supervisor and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Completing a checklist of tasks	
	6	Spreadsheets: Formatting	Reading a troubleshooting guide (multiple choice questions)	Listening to a conversation between a manager and an	Acting out a dialogue between a manager and an employee	Writing tips for making worksheets easier to read	

				employee (true/false statements); Completing a conversation			
	9	Image and Design 1	Reading an advice column (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Writing instructions on working with a blurry image	
	10	Image and Design 2	Reading instructions (true/false statements)	Listening to a conversation between a manager and a designer (multiple choice questions); Completing a conversation	Acting out a dialogue between a manager and a designer	Writing a note from a designer about editing a photo	
	11	Web Design and Web Development	Reading course descriptions (multiple choice questions)	Listening to a conversation between a student and an instructor (true/false statements); Completing a conversation	Acting out a dialogue between an instructor and a student	Completing a student's notes	

	12	Web Browsing: Parts	Reading a user's guide (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing a note explaining how to access a website more quickly	
	13	Web Browsing: Actions	Reading a webpage (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing an IT service request form	
				Book 3			
	1	Operating Systems 1	Reading a letter (true/false statements)	Listening to a conversation between an IT employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an IT employee and a manager	Writing an e-mail about operating systems	

GRADE 11

Description of module content and learning objectives

Module objectives 11th grade	The module is skill-oriented and emphasizes on developing and consolidating practical skills in a variety of relevant work-related contexts. It focuses both on fluency in language use as well as on accuracy.
	Students learn and practice **how to**:
Module 1 Focus on vocabulary Use of terminology in the foreign language	General linguistic range - Use simple and more complex structures correctly but still systematically makes some mistakes - Pronounce words and phrases generally clear enough to be understood but still has a strong influence on stress, rhythm and intonation from the other language spoken - Clearly pronounce familiar words although repetition is needed from time to time - produce sounds in the target language if carefully guided. It may affect intelligibility, requiring collaboration from interlocutors. - Use effectively and close to independently a repertoire of basic language which enables them to deal with everyday situations with predictable - Convey very basic content, though they will generally have to compromise the message and search for words/signs. - get by using enough language, with sufficient vocabulary to express themselves with some hesitation and circumlocutions on topics such as family, hobbies and interests, work, travel and current events, but lexical limitations cause repetition and even difficulty with formulation at times. Vocabulary range

- use sufficient vocabulary to conduct routine everyday transactions involving familiar situations and topics.
- Express using sufficient vocabulary basic communicative needs.
- Cope with survival and routine needs using sufficient vocabulary for coping.
- Communicate using a good range of vocabulary related to familiar topics and everyday situations.

Grammatical accuracy

- employ a range of principles of word/sign order in short statements. Shows only limited control of a few simple grammatical structures and sentence patterns in a learnt repertoire.
- Use a range of structures correctly, but still systematically makes mistakes; nevertheless, it is usually clear what they are trying to say.
- Communicate using reasonably accurately a repertoire of frequently used "routines" and patterns associated with more predictable situations.

Vocabulary control

- control a narrow repertoire dealing with concrete, everyday needs and in professional context
- Clearly pronounce enough to be understood, but conversational partners will need to ask for repetition from time to time.
- Can deal with situations affected by a strong influence by the other language(s) they speak on stress, rhythm and intonation, requiring collaboration from interlocutors.
- Demonstrate an intelligible pronunciation when communicating in simple everyday situations, provided the interlocutor makes an effort to understand specific sounds.
- Communicate with the interlocutor when systematic mispronunciation of phonemes might hinder intelligibility, provided the interlocutor makes an effort to recognise and adjust to the influence of the speaker's language background on pronunciation.
- use the rhythm and intonation of everyday words and phrases intelligibly, in spite of a strong influence on stress, intonation and/or rhythm from the other language(s) they speak.
- Language features (e.g. word stress) are adequate for familiar everyday words and simple utterances.
-

Module 2 Professional communication in the foreign language	Students learn and practice **how to** Interact with colleagues or customers generally and more specifically for the level **how to**: Verbally - Can make and respond to invitations, suggestions, apologies, etc. using learnt phrases and memorized exchanges - Can handle very short social exchanges, using everyday polite forms of greeting and address - Can expand learnt phrases through simple recombination of their elements - Can ask for attention - adapt well-rehearsed, memorised, simple phrases to particular circumstances through limited lexical substitution and difficulties in articulating less familiar words is usual. - Can expand learnt phrases through simple recombinations of their elements. - Can use simple techniques to start, maintain or close a short conversation. - Can give an example of something in a very simple text using "like" or "for example". - Can communicate what they want to say in a simple and direct exchange of limited information on familiar - communicate basic information about basic professional details and needs of a concrete type in a simple way. - communicate very basic information about professional topics in a simple way, while pausing is expected and usual to search for expressions - manage very short, isolated, rehearsed utterances using gesture and signalled requests for help when necessary. - Can perform and respond to basic language functions, e.g. information exchange and requests, and express opinions and attitudes in a simple way. - Can socialise simply but effectively using the simplest common expressions and following basic routines. In Writing - write short messages, e-mail messages, memos following a sample - write SMSs using standard abbreviations and basic repertoire of written words and phrases

	- fill in forms with details related to standards work situations - write simple isolated phrases and sentences, which I have memorized or copied. - write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things. - take notes related to matters of immediate interest in work - write simple isolated phrases and sentences, which he/she have memorized or copied. - write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things. - give information about matters of personal and professional relevance (e.g. likes and dislikes, family, pets) using simple words/signs and basic expressions. - produce simple isolated phrases and sentences. - describe in very simple language what a familiar object looks like.

Description of language skills

Level of language skills	General language skills	Professional language skills	Examples **Teaching and learning resources developing these occupational skills**
Understanding Listening **A2**	Can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Can catch the main point in short, clear, simple messages and announcements.	➢ can understands phrases and expressions related to the most immediate priority in the work environment ➢ can identify the topic of discussion ➢ can follow speech which is very slow and carefully articulated ➢ can understand instructions addressed carefully and slowly ➢ Can catch the main point in short, clear, simple message and announcements ➢ Can understands simple technical information, such as operating instructions for everyday equipment if clearly and slowly articulated ➢ Can extract the essential information from short, recorded passages dealing with predictable everyday work matters ➢ can understand enough to be able to meet needs of a concrete type provided speech is clearly and slowly articulated	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercises 5, 6 and 7 of Unit 10 Images and Graphic Design ▪ Book 1 Exercises 5, 6 and 7 of Unit 5 Networking, p. 12-13 ▪ Book 1 Exercises 5, 6 and 7 of Unit 12 Web Design vs Web Development ▪ Book 1 Exercises 5, 6 and 7 of Unit 13 Desktop Publishing ▪ Book 1 Exercises 5, 6 and 7 of Unit 14 Videoconferencing ▪ Book 1 Exercises 5, 6 and 7 of Unit 15 E-commerce ▪ Book 2 Exercises 5, 6 and 7 of Unit 1 Computer Memory ▪ Book 2 Exercises 5, 6 and 7 of Unit 3 ISPs and Internet Access ▪ Book 2 Exercises 5, 6 and 7 of Unit 4 Storage Devices ▪ Book 2 Exercises 5, 6 and 7 of Unit 5 Peripherals ▪ Book 2 Exercises 5, 6 and 7 of Unit 6 MP3 Players, p. 14-15 ▪ Book 2 Exercises 5, 6 and 7 of Unit 7 Cell Phones, p. 16-17 ▪ Book 2 Exercises 5, 6 and 7 of Unit 9 Entertainment

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➤ Can follow in outline short, simple social exchanges, conducted very slowly and clearly.

➤ Can generally identify the topic of discussion around them when it is conducted slowly and clearly.

➤ Can recognise when people agree and disagree in a conversation conducted slowly and clearly.

➤ Can understand and follow a series of instructions for familiar everyday activities such as sports, cooking, etc., provided they are delivered slowly and clearly.

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and Social Networking, p. 20-21
- Book 2 Exercises 5, 6 and 7 of Unit 10 Geographic Information Systems, p. 22-23
- Book 2 Exercises 5, 6 and 7 of Unit 11 Banking, p. 24-25
- Book 2 Exercises 5, 6 and 7 of Unit 14 Electronic Publishing, p. 30-31
- Book 2 Exercises 5, 6 and 7 of Unit 15 Artificial Intelligence, p. 32-33

- Book 3 Exercises 5, 6 and 7 of Unit 4 Advertising and Marketing, p. 10-11
- Book 3 Exercises 5, 6 and 7 of Unit 6 Telecommuting, p. 14-15
- Book 3 Exercises 5, 6 and 7 of Unit 11 Cloud Computing, p. 24-25
- Book 3 Exercises 5, 6 and 7 of Unit 13 Creative Design, p. 28-29
- Book 3 Exercises 5, 6 and 7 of Unit 14 System Administration, p. 30-31
- Book 3 Exercises 5, 6 and 7 of Unit 15 Programming

  Additional units:
- Book 3 Exercises 5, 6 and 7 of Unit 7 Hackers and Viruses
- Book 3 Exercises 5, 6 and 7 of Unit 8 Identity Theft
- Book 3 Exercises 5, 6 and 7 of Unit 9 Preventive Measures
- Book 3 Exercises 5, 6 and 7 of Unit 10 Antivirus Software

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From Computing, Express Publishing, 2022

- Book 1 Exercises 5, 6 and 7 of Unit 9 Cameras
- Book 1 Exercises 5, 6 and 7 of Unit 10 Smartphones, p. 22-23

- Book 3 Exercises 5, 6 and 7 of Unit 3 Networking: Devices and Equipment
- Book 3 Exercises 5, 6 and 7 of Unit 4 Networking: Types of Networks
- Book 3 Exercises 5, 6 and 7 of Unit 5 Networks: Troubleshooting
- Book 3 Exercises 5, 6 and 7 of Unit 13 Cloud Computing: Types of Clouds, p. 28-29
- Book 3 Exercises 5, 6 and 7 of Unit 14 Cloud Computing: SaaS, p. 30-31
- Book 3 Exercises 5, 6 and 7 of Unit 15 Cloud Computing: Iaas and Paas, p. 32-33

From Electronics, Express Publishing, 2022

- Book 3 Exercises 5, 6 and 7 of Unit 3 Disassembling Devices
- Book 3 Exercises 5, 6 and 7 of Unit 4 Replacing Components
- Book 3 Exercises 5, 6 and 7 of Unit 5 Choosing Components
- Book 3 Exercises 5, 6 and 7 of Unit 7 Input/Output

			Tasks developed by the teacher
			▪ Guidelines for construction of tasks
Reading **A1+ to A2**	Can read very short, simple texts. Can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and can understand short simple personal letters.	➢ can read and extract the necessary information related to working environment and the occupation. ➢ can extract the important information and main points from short specialised texts, manuals, orders, instructions, etc. ➢ can get a general understanding of a occupation-specific text.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercises 2, 3 and 4 of Unit 10 Images and Graphic Design ▪ Book 1 Exercises 2, 3 and 4 of Unit 5 Networking, p. 12-13 ▪ Book 1 Exercises 2, 3 and 4 of Unit 12 Web Design vs Web Development ▪ Book 1 Exercises 2, 3 and 4 of Unit 13 Desktop Publishing ▪ Book 1 Exercises 2, 3 and 4 of Unit 14 Videoconferencing ▪ Book 1 Exercises 2, 3 and 4 of Unit 15 E-commerce ▪ Book 2 Exercises 2, 3 and 4 of Unit 1 Computer Memory ▪ Book 2 Exercises 2, 3 and 4 of Unit 3 ISPs and Internet Access ▪ Book 2 Exercises 2, 3 and 4 of Unit 4 Storage Devices ▪ Book 2 Exercises 2, 3 and 4 of Unit 5 Peripherals ▪ Book 2 Exercises 2, 3 and 4 of Unit 6 MP3 Players, p. 14-15 ▪ Book 2 Exercises 2, 3 and 4 of Unit 7 Cell Phones, p. 16-17 ▪ Book 2 Exercises 2, 3 and 4 of Unit 9 Entertainment and Social Networking, p. 20-21 ▪ Book 2 Exercises 2, 3 and 4 of Unit 10 Geographic Information Systems, p. 22-23 ▪ Book 2 Exercises 2, 3 and 4 of Unit 11 Banking, p. 24-

			25
			▪ Book 2 Exercises 2, 3 and 4 of Unit 14 Electronic Publishing, p. 30-31
			▪ Book 2 Exercises 2, 3 and 4 of Unit 15 Artificial Intelligence, p. 32-33
			▪ Book 3 Exercises 2, 3 and 4 of Unit 4 Advertising and Marketing, p. 10-11
			▪ Book 3 Exercises 2, 3 and 4 of Unit 6 Telecommuting, p. 14-15
			▪ Book 3 Exercises 2, 3 and 4 of Unit 11 Cloud Computing, p. 24-25
			▪ Book 3 Exercises 2, 3 and 4 of Unit 13 Creative Design, p. 28-29
			▪ Book 3 Exercises 2, 3 and 4 of Unit 14 System Administration, p. 30-31
			▪ Book 3 Exercises 2, 3 and 4 of Unit 15 Programming
			Additional units:
			▪ Book 3 Exercises 2, 3 and 4 of Unit 7 Hackers and Viruses
			▪ Book 3 Exercises 2, 3 and 4 of Unit 8 Identity Theft
			▪ Book 3 Exercises 2, 3 and 4 of Unit 9 Preventive Measures
			▪ Book 3 Exercises 2, 3 and 4 of Unit 10 Antivirus Software
			From Computing, Express Publishing, 2022
			▪ Book 1 Exercises 2, 3 and 4 of Unit 9 Cameras

			▪ Book 1 Exercises 2, 3 and 4 of Unit 10 Smartphones, p. 22-23 ▪ Book 3 Exercises 2, 3 and 4 of Unit 3 Networking: Devices and Equipment ▪ Book 3 Exercises 2, 3 and 4 of Unit 4 Networking: Types of Networks ▪ Book 3 Exercises 2, 3 and 4 of Unit 5 Networks: Troubleshooting ▪ Book 3 Exercises 2, 3 and 4 of Unit 13 Cloud Computing: Types of Clouds, p. 28-29 ▪ Book 3 Exercises 2, 3 and 4 of Unit 14 Cloud Computing: SaaS, p. 30-31 ▪ Book 3 Exercises 2, 3 and 4 of Unit 15 Cloud Computing: Iaas and Paas, p. 32-33 From Electronics, Express Publishing, 2022 • Book 3 Exercises 2, 3 and 4 of Unit 3 Disassembling Devices • Book 3 Exercises 2, 3 and 4 of Unit 4 Replacing Components • Book 3 Exercises 2, 3 and 4 of Unit 5 Choosing Components • Book 3 Exercises 2, 3 and 4 of Unit 7 Input/Output Tasks developed by the teacher Guidelines for construction of tasks

| Speaking

Spoken interaction
A1+ to A2 | Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. Can handle very short social exchanges, even though cannot usually understand enough to keep the conversation going myself. | ➢ can exchange information on a variety of simple and routine matters directly related to the immediate work environment.
➢ can ask questions, confirm information and avoid misunderstanding
➢ can handle a simple conversation in order to obtain goods and services
➢ can handle simple social exchanges with customers/colleagues, e.g. introductions, invitations, apologies.
➢ can ask and answer simple questions about someone's preferences, requests, purchases and orders.
➢ can ask and answer questions about my own area of work using simple language.
➢ can ask for and give directions referring to a map or plan.
➢ can discuss in a very simple way events, activities and plans.
➢ can take simple telephone calls or put callers through.
➢ can make arrangements concerning meeting points/date/time/arrival and departure, when simple language is used. | From Information Technology, Express Publishing, 2022

▪ Book 1 Exercises 1, 7 and 8 of Unit 10 Images and Graphic Design
▪ Book 1 Exercises 1, 7 and 8 of Unit 5 Networking, p. 12-13
▪ Book 1 Exercises 1, 7 and 8 of Unit 12 Web Design vs Web Development
▪ Book 1 Exercises 1, 7 and 8 of Unit 13 Desktop Publishing
▪ Book 1 Exercises 1, 7 and 8 of Unit 14 Videoconferencing
▪ Book 1 Exercises 1, 7 and 8 of Unit 15 E-commerce

▪ Book 2 Exercises 1, 7 and 8 of Unit 1 Computer Memory
▪ Book 2 Exercises 1, 7 and 8 of Unit 3 ISPs and Internet Access
▪ Book 2 Exercises 1, 7 and 8 of Unit 4 Storage Devices
▪ Book 2 Exercises 1, 7 and 8 of Unit 5 Peripherals
▪ Book 2 Exercises 1, 7 and 8 of Unit 6 MP3 Players, p. 14-15
▪ Book 2 Exercises 1, 7 and 8 of Unit 7 Cell Phones, p. 16-17
▪ Book 2 Exercises 1, 7 and 8 of Unit 9 Entertainment and Social Networking, p. 20-21
▪ Book 2 Exercises 1, 7 and 8 of Unit 10 Geographic Information Systems, p. 22-23
▪ Book 2 Exercises 1, 7 and 8 of Unit 11 Banking, p. 24-25
▪ Book 2 Exercises 1, 7 and 8 of Unit 14 Electronic Publishing, p. 30-31 |

			▪ Book 2 Exercises 1, 7 and 8 of Unit 15 Artificial Intelligence, p. 32-33
			▪ Book 3 Exercises 1, 7 and 8 of Unit 4 Advertising and Marketing, p. 10-11
			▪ Book 3 Exercises 1, 7 and 8 of Unit 6 Telecommuting, p. 14-15
			▪ Book 3 Exercises 1, 7 and 8 of Unit 11 Cloud Computing, p. 24-25
			▪ Book 3 Exercises 1, 7 and 8 of Unit 13 Creative Design, p. 28-29
			▪ Book 3 Exercises 1, 7 and 8 of Unit 14 System Administration, p. 30-31
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			From Computing, Express Publishing, 2022
			▪ Book 1 Exercises 1, 7 and 8 of Unit 9 Cameras
			▪ Book 1 Exercises 1, 7 and 8 of Unit 10 Smartphones, p. 22-23

			- Book 3 Exercises 1, 7 and 8 of Unit 3 Networking: Devices and Equipment - Book 3 Exercises 1, 7 and 8 of Unit 4 Networking: Types of Networks - Book 3 Exercises 1, 7 and 8 of Unit 5 Networks: Troubleshooting - Book 3 Exercises 1, 7 and 8 of Unit 13 Cloud Computing: Types of Clouds, p. 28-29 - Book 3 Exercises 1, 7 and 8 of Unit 14 Cloud Computing: SaaS, p. 30-31 - Book 3 Exercises 1, 7 and 8 of Unit 15 Cloud Computing: Iaas and Paas, p. 32-33 From Electronics, Express Publishing, 2022 - Book 3 Exercises 1, 7 and 8 of Unit 3 Disassembling Devices - Book 3 Exercises 1,7 and 8 of Unit 4 Replacing Components - Book 3 Exercises 1, 7 and 8 of Unit 5 Choosing Components - Book 3 Exercises 1, 7 and 8 of Unit 7 Input/Output Tips for teachers: - Use simple, basic, short texts (proposed in the Teacher's Book or developed individually by the teacher for Exercise 1; you can use visuals, is the targeted vocabulary allows, use a diagram, plan or a

			map; construct simple sentences intended as part of a simple conversation in order to obtain goods and services; you can present a simple social exchange and they role play it with a student) ▪ Speaking and interacting with a partner on job-specific topics (very basic repertoire of words and simple phrases related to the topic) ▪ Role play (in pairs) getting someone's attention, giving instructions, indicating a course of actions, making suggestions, identifying a problem, checking for errors, expressing confusion, making comparison, asking about knowledge, making a recommendation, describing a problem, etc. ▪ Example: practice a conversation about a problem with a purchase as in Unit 14 of Book 2 from Electronics, Express Publishing (there is a model conversation, which students can first read, then try to act as it is and after than act after introducing small changes mostly in use of vocabulary) Tasks developed by the teacher Guidelines for construction of tasks
	Can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my	➢ can describe myself and my environment, using simple language. ➢ can give a simple account of my work place, my job or company.	Oral production (speaking) activities: ▪ The language user produces an oral text which is received by an audience of one or more listeners.

Spoken production **A1+**	educational background and my present or most recent job.	➢ can produce simple mainly isolated phrases about people and places related to my occupation. ➢ can read a very short, rehearsed statement – e.g. to introduce a person, propose a product.	▪ Examples: reading a written text aloud, speaking from notes or visual aids (diagram, pictures, charts, etc.) ▪ Acting out a rehearsed role See above exercises for speaking interaction: ▪ Distribute role cards – students read their role cards ▪ Write a diagram of the role play words/sentences on the board
Writing A1+	Can write short, simple notes and messages. Can write a very simple personal letter, for example thanking someone for something.	• can write short letters, messages, e-mail messages, memos following a sample • can write SMSs using standard abbreviations. • can take notes related to matters of immediate interest in work • can fill in forms with personal details (job, age, address, etc. • can write simple isolated phrases and sentences, which I have memorized or copied. • can write simple notes to colleagues/friends about appointments (time, place) often using familiar templates, and including greetings, forms of address, formulas to thank and ask for things.	From Information Technology, Express Publishing, 2022 ▪ Book 1 Exercise 9 of Unit 10 Images and Graphic Design ▪ Book 1 Exercise 9 of Unit 5 Networking, p. 12-13 ▪ Book 1 Exercise 9 of Unit 12 Web Design vs Web Development ▪ Book 1 Exercise 9 of Unit 13 Desktop Publishing ▪ Book 1 Exercise 9 of Unit 14 Videoconferencing ▪ Book 1 Exercise 9 of Unit 15 E-commerce ▪ Book 2 Exercise 9 of Unit 1 Computer Memory ▪ Book 2 Exercise 9 of Unit 3 ISPs and Internet Access ▪ Book 2 Exercise 9 of Unit 4 Storage Devices ▪ Book 2 Exercise 9 of Unit 5 Peripherals ▪ Book 2 Exercise 9 of Unit 6 MP3 Players, p. 14-15 ▪ Book 2 Exercise 9 of Unit 7 Cell Phones, p. 16-17 ▪ Book 2 Exercise 9 of Unit 9 Entertainment and Social Networking, p. 20-21 ▪ Book 2 Exercise 9 of Unit 10 Geographic Information Systems, p. 22-23 ▪ Book 2 Exercise 9 of Unit 11 Banking, p. 24-25 ▪ Book 2 Exercise 9 of Unit 14 Electronic Publishing, p.

			30-31
			▪ Book 2 Exercise 9 of Unit 15 Artificial Intelligence, p. 32-33
			▪ Book 3 Exercise 9 of Unit 4 Advertising and Marketing, p. 10-11
			▪ Book 3 Exercise 9 of Unit 6 Telecommuting, p. 14-15
			▪ Book 3 Exercise 9 of Unit 11 Cloud Computing, p. 24-25
			▪ Book 3 Exercise 9 of Unit 13 Creative Design, p. 28-29
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			▪ Book 3 Exercise 9 of Unit 15 Programming
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			▪ Book 3 Exercise 9 of Unit 10 Antivirus Software
			From Computing, Express Publishing, 2022
			▪ Book 1 Exercise 9 of Unit 9 Cameras
			▪ Book 1 Exercise 9 of Unit 10 Smartphones, p. 22-23
			▪ Book 3 Exercise 9 of Unit 3 Networking: Devices and Equipment
			▪ Book 3 Exercise 9 of Unit 4 Networking: Types of Networks

| | | | Book 3 Exercise 9 of Unit 5 Networks: Troubleshooting Book 3 Exercise 9 of Unit 13 Cloud Computing: Types of Clouds, p. 28-29 Book 3 Exercise 9 of Unit 14 Cloud Computing: SaaS, p. 30-31 Book 3 Exercise 9 of Unit 15 Cloud Computing: Iaas and Paas, p. 32-33
From Electronics, Express Publishing, 2022
Book 3 Exercise 9 of Unit 3 Disassembling Devices
Book 3 Exercise 9 of Unit 4 Replacing Components
Book 3 Exercise 9 of Unit 5 Choosing Components
Book 3 Exercise 9 of Unit 7 Input/Output
Tasks developed by the teacher
Guidelines for construction of tasks |
| | | | |

Teaching/learning contents (guide lines) - Computer technical services, 11th grade

2 teaching hours per week

Topics from the Curriculum Package	Resources (See examples of appropriate resources)	Linguistic aspects/teaching and learning methods
1) SYSTEM MAINTENANCE AND REPAIR Peripherals	From Information Technology, Express Publishing, 2022 Book 2 Unit 5 Peripherals, p. 12-13	
Image processing devices	From Information Technology, Express Publishing, 2022 Book 1 Unit 10 Images and Graphic Design, p. 22-23 From Computing, Express Publishing, 2022	

	Book 1 Unit 9 Cameras, p. 20-21	
Memory units Disk Drives Hardware cards	From Information Technology, Express Publishing, 2022 Book 2 Unit 1 Computer Memory, p. 4-5 Unit 4 Storage Devices, p. 10-11	
PROGRAMMING	From Information Technology, Express Publishing, 2022 Book 3 Unit 15 Programming, p. 32-33 (revision)	
NETWORK SYSTEMS Networking	From Computing, Express Publishing, 2022 Book 3 Unit 3 Networking: Devices and Equipment, p. 8 -9 Unit 4 Networking: Types of Networks, p. 10-11	

	From Information Technology, Express Publishing, 2022
	Book 1
	Unit 5 Networking, p. 12-13
	Vocational Foreign Language version, Department of Information Technologies, 11-12 course material, by Dr. Selçuk Yusuf ARSLAN, Çiğdem TUFAN TUĞCU and Hülya ÖZKAN
	Unit 2.1. Networks, p. 52-60
	Information & Communication Technology, Vocational English Courses, by Çiğdem Ölçter - Yağiş Yildirim, Mint Advertising (digital version)
	Unit 3 Network Concepts
SYSTEM CONTROL APPLICATIONS	From Electronics, Express Publishing, 2022
	Book 3
Sensors and transducers	Unit 7 Input/Output, p. 16-17
Arduino	Tasks developed by the teacher for reading and listening comprehension (understanding), for writing production and specially constructed dialogues for exercising oral interaction and short presentation of the products for oral production (relevant websites can be used

	for developing searching tasks and language skills tasks as for example: https://www.arduino.cc/en/Guide/Introduction https://www.arduino.cc/en/Guide, etc.)
SYSTEM PROTECTIVE MAINTENANCE REPAIR	From Electronics, Express Publishing, 2022 Book 3 Unit 3 Disassembling Devices, p. 8-9 Unit 4 Replacing Components, p. 10-11 Unit 5 Choosing Components, p. 12-13
Preventive maintenance	From Computing, Express Publishing, 2022 Book 3 Unit 5 Network Troubleshooting, p. 12-13
Network troubleshooting	From Information Technology, Express Publishing, 2022 Book 3 Unit 7 Hackers and Viruses, p. 16-17

	Unit 8 Identity Theft, p. 18-19	
	Unit 10 Antivirus Software, p. 22-23 (revision)	
	Unit 9 Preventive measures, p. 20-21	
ADDITIONAL TOPICS	From Information Technology, 2022	
	Book 1	
	Unit 12 Web Design vs Web Development, p. 26-27	
	Unit 13 Desktop Publishing, p. 28-29	
	Uni 14 Videoconferencing, p. 30-31	
	Unit 15 E-commerce, p. 32-33	
	Book 2	
	Unit 3 ISPs and Internet Access, p. 8-9	

Assessment:

> ➤ Self-assessment: According to the scale in the self-assessment grid of the Common European Framework (CEFR)
> ➤ Tutor assessment: Tests, quizzes, case studies, simulations, role plays
> ➤ Final assessment: Test, case study

Recommended learning time:

> ➤ 60 hours face to face learning
> ➤ 60 hours individual learning

Teaching/learning contents (guide lines) - Software and web operations, 11th grade

2 teaching hours per week

TOPIC/ CONTEXT Topics from the *Curriculum Package* **Programming and web operations**	*Resources* See examples of appropriate resources	*Teaching and learning focus and methods* *Linguistic aspects/teaching and learning methods*
PROGRAMMING	Computing, Express Publishing, 2022 Book 3 Unit 13 Cloud Computing: Types of Clouds, p. 28-29 Book 3 Unit 14 Cloud Computing: SaaS, p. 30-31 Book 3 Unit 15 Cloud Computing: Iaas and Paas, p. 32-33 From Information Technology, Express Publishing, 2022 Book 3 Unit 11 Cloud Computing, p. 24-25	

	From Information Technology, Express Publishing, 2022	
	Book 2 Unit 15 Artificial Intelligence, p. 32-33	
	Book 3 Unit 15 Programming, p. 32-33	
	Book 3 Unit 14 System Administration, p. 30-31	
WEB DESIGN	From Information Technology, Express Publishing, 2022	
	Book 2 Unit 4 Storage Devices, p. 10-11	
WEB APPLICATIONS	From Information Technology, Express Publishing, 2022	
	Book 2 Unit 14 Electronic Publishing, p. 30-31	
	Book 2 Unit 11 Banking, p. 24-25	
	Book 1 Unit 15 E-Commerce, p. 32-33	
	Book 2 Unit 10 Geographic Information Systems, p. 22-23	
	Book 3 Unit 6 Telecommuting, p. 14-15	
GRAPHICS AND ANIMATION	From Information Technology, Express Publishing, 2022	
	Book 3 Unit 13 Creative Design, p. 28-29	

MOBILE APPS	Book 3 Unit 4 Advertising and Marketing, p. 10-11 From Information Technology, Express Publishing, 2022 Book 2 Unit 7 Cell Phones, p. 16-17 Book 2 Unit 9 Entertainment and Social Networking, p. 20-21 Book 2 Unit 6 MP3 Players, p. 14-15 Computing, Express Publishing, 2022 Book 1 Unit 10 Smartphones, p. 22-23	

Assessment:

- ➢ Self-assessment: According to the scale in the self-assessment grid of the Common European Framework (CEF)
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- ➢ Final assessment: Test, case study

Recommended learning time:

- ➢ 60 hours face to face learning
- ➢ 60 hours individual learning

Vocabulary focus for reading and listening comprehension

Getting Started provides warm-up questions about the chapter topic. The questions' main purpose is to activate students' prior knowledge about the topic before they read the passage or listen to the audio file. The 'Get Ready!' exercise includes suggestions of questions that can serve this function. The teachers can also ask additional questions related to the school and occupational environment to activate students' prior knowledge.

Target words (terms)

Each unit introducing target words and asks students to assess their knowledge of each word both before and after they work through the chapter. Vocabulary learning is incremental (gradual, step-by step). Revision is required at least 3-4 times during the school year in various contexts. Even if students do not achieve productive mastery of every word by the time the chapter is finished, the process can show partial improvement (for example, from *no knowledge* to *receptive knowledge*). By avoiding a *no knowledge / full mastery dichotomy*, the process can show smaller degrees of learning. We would expect every student to learn enough about the target words to show some improvement, which should maintain and enhance their motivation.

Reading presents a reading passage that has been graded in various levels of difficulty. The embedding of the target vocabulary in these texts ensures that it is not introduced in isolation, but in meaningful contexts. There is also a great deal of target vocabulary in these texts that is not specifically focused on in the chapter, and that provides natural recycling in new contexts of words students have already studied.

In addition, the passages are suitable for a wide range of reading-based tasks that can be constructed by the teacher to ensure mastering of target words. This integration of reading and vocabulary allows the study of lexis in programs that have a reading focus, and promotes the beneficial concurrent improvement of reading and vocabulary skills. For example, at the end of each passage, there are exercises (Reading Comprehension) that focus on comprehension ranging from literal details, recognition o true/false, matching of terms with definitions and filling gaps with targeted words.

Focusing on Vocabulary means:

• Word Meaning features a variety of exercises designed to help students learn the meaning of each of the twenty-four target words.

• Word Families provides practice in recognizing and using the various derivative word forms that make up a word's family (or words of the same category).

• Collocation exercises are designed to improve students' intuitions about the collocations a word takes (mouse, LED mouse, laser mouse, ball mouse).

Vocabulary Learning Strategies

To learn target words well, students will need to continue meeting and learning these word families outside of this book. This means you will need to use vocabulary strategies to maximize your learning. Below, we describe a number of these vocabulary learning strategies.

USING A DICTIONARY
One of the most important reasons to use a dictionary is to discover a word's meaning. However, many words have more than one meaning, and you must be careful to choose the one that matches the context.

3 Match the words or phrases (1-8) with the definitions (A-H).

1 __ Mac		5 __ hardware	
2 __ Windows		6 __ software compatible	
3 __ macOS		7 __ processing speed	
4 __ Linux		8 __ vulnerable	

A a computing device
B being able to run different programs
C an operating system developed by Apple
D an operating system that uses open source software
E a measure of how fast a computer operates
F an operating system developed by Microsoft
G a computer developed by Apple
H open to attack

Teachers can design similar tasks using a dictionary or the glossary to the teaching and learning resources as part of this package.

GUESSING FROM CONTEXT

Guessing the meaning of a new word from context is a very good way to supplement the learning of vocabulary from a book like this. You can get clues from the surrounding words and the construction of the sentences.

Teachers can use short texts for guessing from context. The teachers can ask questions such as:

What is the meaning of ……..?
What are the clues that helped you discover this meaning?
How could this help you understand the meaning of ……….?

EXTENSIVE READING

Although students gain a lot of benefits from studying words, they also need to see or hear them in many contexts to understand how to use them appropriately. One of the best ways to gain this wide exposure is to read extensively. The repeated exposure to words in reading will help students remember their spellings and meanings, and will also show the other words they commonly occur with. In other words, by reading widely, you will eventually begin to get a feel for which words collocate with the words you are learning.

USING INTERNET TOOLS

Nowadays, there are many Internet sites that can help your learning. Teachers can use internet sources for allowing for extensive reading and seeing target words in many contexts to understand how to use them appropriately.

Guide to Vocabulary Focus Approach - Computer technical services, 11th grade

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments /additional target words
				Book 1	
	5	Networking	Reading an article about networks (multiple choice questions)	CAT-5 cable, configuration, DHCP, Internet, IP address, LAN, network, power cycle, router, WLAN	
	10	Images and graphic design	Reading an article from a magazine (multiple choice questions)	contrast, crop, exposure, graphic editing program, graphics, JPEG, pixel, resize, resolution, tint	
	12	Web design vs. web development	Reading an article from a business newsletter (multiple choice questions)	appearance, coding, content, CSS, functionality, navigation, usability, visibility, web design, web development	

	13	Desktop publishing	Reading a job listing for a position (multiple choice questions)	clip art, comprehensive layout, desktop publishing software, desktop publishing, electronic page, electronic paper, electrostatic printing, graphic communications, offset lithography, page layout	
	14	Videoconferencing	Reading an email from an IT professional (true/false statements)	bandwidth, codec, dedicated system, document sharing, echo-cancellation, multipoint videoconference, video bridge, v ideoconferencing, webcam	
	15	E-commerce	Reading an email from a marketing director (true/false statements)	affiliate, banner, brick and mortar, certificate authority, digital certificate, e-commerce, FAQs, page view, shopping cart, traffic	
			Book 2		
	1	Computer memory	Reading a troubleshooting guide (multiple choice questions)	bit, bit size, bus speed, DIMM, MB, MHz, paging file, RAM, SIMM, virtual memory	

	3	ISPs and Internet access	Reading a notification from an internet service provider (multiple choice questions)	antivirus software, broadband, DSL, hotspot, ISP, T-1, T-3, upgrade, Wi-Fi®, WPS	
	4	Storage devices	Reading a suggestion form an employee in the IT department to his manager (multiple choice questions)	array, cloud computing, failure, HDD, hybrid array, RAID, SATA, SSD, USB flash drive	
	5	Peripherals	Reading a computer store advertisement (multiple choice questions)	automatic document feeder, calibration, CCD, digital camera, digital zoom, DPI, flash memory, inkjet printer, laser printer, megapixel, optical zoom, transparency adapter	
			Book 3		
	7	Hackers and viruses	Reading a newspaper article (multiple choice questions)	anti-antivirus virus, hacker, host computer, imbed, infect, log in, overwriting virus, piggybacking, replicate, resident extension, resident virus, virus	

	8	Identity theft	Reading a letter from a bank to its customers (true/false statements)	card scanning, cyber, malware, pharming, phishing, pretexting, scanner, spyware, Trojan horse, worm	
	9	Preventative measures	Reading an email about safety measures (multiple choice conversation)	attack, audit log, authenticated, backdoor, bug, firewall, intruder, keylogger, patch, pop-up, protocol, security breach	
	10	Anti-virus software	Reading an anti-virus software advertisement (multiple choice questions)	backup, block, cyber criminal, detect, false negative, false positive, quarantine, rootkit, security software, sweep, virus removal software, webpage analysis	
	15	Programming	Reading advertisements for programming jobs (multiple choice questions)	back end, component, editor, interactive, PHP, programmer, script, user-friendly, Visual Basic, web developer, XML	

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments /Additional target words
Book 1					
	9	Cameras	Reading an advertisement (true/false statements)	compression, digital camera, digital zoom, JPEG, megapixel, optical zoom, pixel count, SD card, white balance	
Book 3					
	3	Networking: Devices and Equipment	Reading a product listing (multiple choice questions)	access point, antenna, cable modem, CAT-5, hub, networking, router, switch, wireless router, wireless network adapter	
	4	Networking: Types of Networks	Reading a website (multiple choice questions)	broadband, cable Internet, DNS, DSL, Ethernet, hotspot, ISP, LAN, VPN, Wi-Fi®, WLAN	
	5	Networks: Troubleshooting	Reading a website (multiple choice questions)	cache, clear, cycle, detect, disconnect, IP address, log in, password, plug in, renew, signal, TCP/IP	

Electronics, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments /Additional target words
				Book 3	
	3	Disassembling devices	Reading a trade magazine article (multiple choice questions)	adhesive, case, come off, disassemble, disconnect, force, hidden, indentation, panel, patience, sealed, smack, snap, stuck	
	4	Replacing components	Reading an article on removing components (true/false statements)	chop off, clear, clip, coating, deform, delaminate, double-check, flow, heatsinking, molten, multi-layer, suck, thermal absorption	
	5	Choosing components	Reading a column on choosing components (multiple choice questions)	application , build up, consider, mail-order, oxidation, reuse, similar, standardized, stockpile, substitute	
	7	Input/Output	Reading an online article (multiple choice questions)	amplification, antenna, audio, cable, collect, composite, display, feed, input, input jack, output, resonate, transducer, varactor	

Guide to Vocabulary Focus Approach - Software and web operations 11th grade

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words	Comments / additional target words
				Book 1	
	15	E-commerce	Reading an email from a marketing director (true/false statements)	affiliate, banner, brick and mortar, certificate authority, digital certificate, e-commerce, FAQs, page view, shopping cart, traffic	
				Book 2	
	4	Storage devices	Reading a suggestion form an employee in the IT department to his manager (multiple choice questions)	array, cloud computing, failure, HDD, hybrid array, RAID, SATA, SSD, USB flash drive	
	6	MP3 Players	Reading a recall notice (true/false statements)	AAC, bitrate, capacity, decode, dock, driver, freeze, GB, MP3, playlist, upload	

	7	Cell phones	Reading a cell phone advertisement on a website (reading for specific information)	5G network, app, Bluetooth®, call waiting, caller ID, cell phone, lithium-ion battery, ringtone, text message, touchscreen, voice activation, voicemail	
	9	Entertainment, gaming and social networking	Reading a memo sent to employees at an advertising firm (true/false statements)	avatar, blog, forum, gaming, handle, link, MMORPG, news feed, post, profile, social networking, virtual world	
	10	GPS systems	Reading an advertisement about GPS products (multiple choice questions)	cartographic, correlated, data capture, GIS, latitude, layer, location, longitude, metadata, raster, remote sensing, spatial pattern, vector	
	11	Banking	Reading a description of online banking on a website (multiple choice questions)	account activity, account alert, bank fraud, bill pay, electronic funds transfer, electronic statement, identity theft, lockout, online banking, PIN, site key, SSL connection	
	14	Electronic publishing	Reading an announcement on a publishing company's website (multiple choice questions)	active matrix display, bitmapped graphic, black and white, download, ergonomic, offline, PDF reader, publication, reflow, sub-pixel rendering, system requirements	
	15	Artificial intelligence	Reading a magazine article on Artificial Intelligence (true/false statements)	agent, algorithm, artificial intelligence, case-based reasoning, cognitive scientist, computer vision, consciousness, heuristics, machine learning, model-based reasoning, pattern recognition, robot	

			Book 3			
	4	Advertising and marketing	Reading an online advertising company contract (true/false statements)	above the fold, ad product, animated GIF, campaign, click-through rate, click tracking, commission, CPC, CPM, frequency capping, geo targeting, hang		
	6	Telecommuting	Reading a letter from an employee to a business owner (multiple choice questions)	Basecamp®, centralize, color-coding, dashboard, gallery, in real time, message board, Microsoft Teams®, SkypeTM, telecommuting, toggle, tour, web-based, Zoom®		
	11	Cloud computing	Reading a newspaper column about technology (multiple choice questions)	CDN, deployment, elasticity, IaaS, PaaS, pay-as-you-go, private cloud, public cloud, SaaS, scalability, utility computing		
	13	Creative design	Reading an introduction from a website designer's home page (multiple choice questions)	egress filter, ingress filter, keyword, mask, natural language, PCI compliance, redesign, root directory, trust logo, web portal		

	Unit	Topic	Reading	Vocabulary/ Target words	Comments / additional target words
	14	System administration	Reading a job posting (multiple choice questions)	configure, cover letter, duty, file archiving, install, performance tuning, purge, résumé, system administrator, technical, troubleshooting, Unix®	
	15	Programming	Reading advertisements for programming jobs (multiple choice questions)	back end, component, editor, interactive, PHP, programmer, script, user-friendly, Visual Basic, web developer, XML	

Computing, Express Publishing, 2022 11ᵗʰ grade

	Unit	Topic	Reading	Vocabulary/ Target words	Comments / additional target words
				Book 1	
	10	Smartphones	Reading a section from a smartphone user manual (multiple choice questions)	app, built-in, cell phone, feature, GPS, MP3 player, coverage, smartphone, sync, touchscreen	

			Book 3		
	13	Cloud Computing: Types of Clouds	Reading a magazine article (multiple choice questions)	back-end, cloud computing, community cloud, elasticity, front-end, hybrid cloud, metered fee, private cloud, public cloud, scalability	
	14	Cloud Computing: SaaS	Reading a website (multiple choice questions)	application, deployment, distribution, hosted application management, install, pay-as-you-go, SaaS (Software as a Service), software license, software on demand, software suite	
	15	Cloud Computing: IaaS and PaaS	Reading an advertisement (multiple choice questions)	bandwidth, CDN (Content Delivery Network), computing platform, IaaS (Infrastructure as a Service), infrastructure, outsource, PaaS (Platform as a Service), solution stack, storage, switch, utility computing	

Resource for distribution of the teaching/learning content - Computer technical services, 11th grade

(using the description of the teaching/learning content you can indicate when during the school year you plan to use the relevant units and exercises for developing of language skills; under comments you can indicate whether revision is needed and when)

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	5	Networking	Reading an article about networks (multiple choice questions)	Listening to a conversation between an IT professional and a customer (multiple choice questions); Completing a conversation	Acting out a dialogue between a computer store employee and a customer	Filling in a network description sheet	
	10	Images and graphic design	Reading an article from a magazine (multiple choice questions)	Listening to a conversation between a customer and an IT worker (true/false statements); Completing a conversation	Acting out a dialogue between a support center worker and a customer	Completing a note	

	12	Web design vs. web development	Reading an article from a business newsletter (multiple choice questions)	Listening to a conversation between an instructor for a web development class and an employee (multiple choice questions); Completing a conversation	Acting out a dialogue between an instructor and an employee	Answering a sample test questions on web design	
	13	Desktop publishing	Reading a job listing for a position (multiple choice questions)	Listening to a conversation between a job applicant and an interviewer (true/false statements); Completing a conversation	Acting out a dialogue between an interviewer and a candidate	Completing interview notes	
	14	Videoconferencing	Reading an email from an IT professional (true/false statements)	Listening to a conversation between an IT professional and a sales representative (multiple choice questions); Completing a conversation	Acting out a dialogue between an IT professional and a sales representative	Completing an order form	

	15	E-commerce	Reading an email from a marketing director (true/false statements)	Listening to a conversation between two employees (multiple choice questions); Completing a conversation	Acting out a dialogue between two employees	Completing a recommendation	
				Book 2			
	1	Computer memory	Reading a troubleshooting guide (multiple choice questions)	Listening to a conversation between a customer and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a support center employee and a customer	Completing a receipt	
	3	ISPs and Internet access	Reading a notification from an internet service provider (multiple choice questions)	Listening to a conversation between a customer and a customer representative (true/false statements); Completing a conversation	Acting out a dialogue between a customer and a representative	Filling in a customer survey	

	4	Storage devices	Reading a suggestion form an employee in the IT department to his manager (multiple choice questions)	Listening to a conversation between an IT employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Writing a memo to co-workers	
	5	Peripherals	Reading a computer store advertisement (multiple choice questions)	Listening to a conversation between a salesman and a photographer (multiple choice questions); Completing a conversation	Acting out a dialogue between a salesman and a customer	Filling in a customer's review	
	Book 3						
	7	Hackers and viruses	Reading a newspaper article (multiple choice questions)	Listening to a conversation between an employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an employee and a manager	Writing an email to a manager	

	8	Identity theft	Reading a letter from a bank to its customers (true/false statements)	Listening to a conversation between a customer and a bank employee (multiple choice questions); Completing a conversation	Acting out a dialogue between a customer and a bank employee	Writing about identity theft	
	9	Preventative measures	Reading an email about safety measures (multiple choice conversation)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Writing an email to co-workers about security	
	10	Anti-virus software	Reading an anti-virus software advertisement (multiple choice questions)	Listening to a conversation between a caller and an employee (true/false statements); Completing a conversation	Acting out a dialogue between a caller and an employee	Writing out suggestions for a potential customer	
	15	Programming	Reading advertisements for programming jobs	Listening to a conversation between two freelance programmers	Acting out a dialogue between two programmers	Writing an email responding to freelance job postings	

			(multiple choice questions)	(true/false statements); Completing a conversation			

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	9	Cameras	Reading an advertisement (true/false statements)	Listening to a conversation between a store clerk and a customer (true/false statements); Completing a conversation	Acting out a dialogue between a store clerk and a customer	Completing a product description	
				Book 3			

	3	Networking: Devices and Equipment	Reading a product listing (multiple choice questions)	Listening to a conversation between two managers (true/false statements); Completing a conversation	Acting out a dialogue between two managers	Writing a memo about networking equipment for a new office
	4	Networking: Types of Networks	Reading a website (multiple choice questions)	Listening to a conversation between an ISP employee and a customer (true/false statements); Complete a conversation	Acting out a dialogue between an ISP employee and a customer	Writing an e-mail response to a customer's questions about network options
	5	Networks: Troubleshooting	Reading a website (multiple choice questions)	Listening to a conversation between an ISP employee and a customer (true/false statement); Completing a conversation	Acting out a dialogue between an ISP employee and a customer	Creating tips for solving network connectivity problems

Electronics, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 3			
	3	Disassembling devices	Reading a trade magazine article (multiple choice questions)	Listening to a conversation between a technician and an apprentice (true/false statements); Completing a conversation	Acting out a dialogue between a technician and an apprentice	Writing about opening an electronic device	
	4	Replacing components	Reading an article on removing components (true/false statements)	Listening to a conversation between two technicians (true/false statements); Completing a conversation	Acting out a dialogue between two technicians	Writing a memo about the proper way to remove components	
	5	Choosing components	Reading a column on choosing components (multiple choice questions)	Listening to a conversation between a new technician and an experienced technician (true/false statements); Completing a conversation	Acting out a dialogue between a new technician and an experienced technician	Completing a new tech's email to an experienced tech thanking him or her for helping locate a component	

	7	Input/Output	Reading an online article (multiple choice questions)	Listening to a conversation between a customer and a tech (true/false statements); Completing a conversation	Acting out a dialogue between a customer in an electronics repair store and a tech in an electronics repair store	Filling out a repair report	

Resource for distribution of the teaching/learning content - Software and web operations, 11th grade

(using the description of the teaching/learning content you can indicate when during the school year you plan to use the relevant units and exercises for developing of language skills; under comments you can indicate whether revision is needed and when)

Information Technology, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	15	E-commerce	Reading an email from a marketing director (true/false statements)	Listening to a conversation between two employees (multiple choice questions); Completing a conversation	Acting out a dialogue between two employees	Completing a recommendation	
				Book 2			

	4	Storage devices	Reading a suggestion form an employee in the IT department to his manager (multiple choice questions)	Listening to a conversation between an IT employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an employee	Writing a memo to co-workers	
	6	MP3 Players	Reading a recall notice (true/false statements)	Listening to a conversation between a consumer and a company representative (multiple choice questions); Completing a conversation	Acting out a dialogue between a company representative and a consumer	Writing a letter to a company	
	7	Cell phones	Reading a cell phone advertisement on a website (reading for specific information)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Writing a description of a new app	
	9	Entertainment, gaming and social networking	Reading a memo sent to employees at an	Listening to a conversation between two employees	Acting out a dialogue between two employees	Creating a profile about a new computer	

			advertising firm (true/false statements)	(true/false statements); Completing a conversation			
	10	GPS systems	Reading an advertisement about GPS products (multiple choice questions)	Listening to a conversation between a customer and a customer service representative (true/false statements); Completing a conversation	Acting out a dialogue between a customer and a customer service representative	Filling in a customer's note	
	11	Banking	Reading a description of online banking on a website (multiple choice questions)	Listening to a conversation between a bank teller and an account holder (true/false statements); Completing a conversation	Acting out a dialogue between a bank teller and an account holder	Completing a receipt	
	14	Electronic publishing	Reading an announcement on a publishing company's website (multiple choice questions)	Listening to a conversation between a customer and a customer service representative	Acting out a dialogue between a customer and a salesperson	Completing a call summary	

			(true/false statements); Completing a conversation			
	15	Artificial intelligence	Reading a magazine article on Artificial Intelligence (true/false statements)	Listening to a conversation between two programmers (multiple choice questions); Completing a conversation	Acting out a dialogue between two programmers	Writing a paragraph about Artificial Intelligence	
				Book 3			
	4	Advertising and marketing	Reading an online advertising company contract (true/false statements)	Listening to a conversation between a caller and an online advertising company employee (multiple choice questions); Complete a conversation	Acting out a dialogue between a caller and an employee	Writing about how advertising with one's company works	

	6	Telecommuting	Reading a letter from an employee to a business owner (multiple choice questions)	Listening to a conversation between an employee and a manager (true/false statements); Completing a conversation	Acting out a dialogue between an owner and an employee	Explaining a program in a memo to members of staff	
	11	Cloud computing	Reading a newspaper column about technology (multiple choice questions)	Listening to a conversation between an IT worker and a manager (true/false statements); Completing a conversation	Acting out a dialogue between a manager and an IT worker	Writing a proposal for using cloud computing at one's business	
	13	Creative design	Reading an introduction from a website designer's home page (multiple choice questions)	Listening to a conversation between a business owner and a web page designer (true/false statements); Completing a conversation	Acting out a dialogue between a business owner and a web designer	Writing a proposal for the improvement of one's website	
	14	System administration	Reading a job posting (multiple choice questions)	Listening to a conversation between two employees (true/false statements);	Acting out a dialogue between two employees	Writing a brief cover letter	

			Reading	Listening	Speaking	Writing	Comments
				Completing a conversation			
	15	Programming	Reading advertisements for programming jobs (multiple choice questions)	Listening to a conversation between two freelance programmers (true/false statements); Completing a conversation	Acting a out dialogue between two programmers	Writing an email responding to freelance job postings	

Computing, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
				Book 1			
	10	Smartphones	Reading a section from a smartphone user manual (multiple choice questions)	Listening to a conversation between two employees (true/false statements); Completing a conversation	Acting out a dialogue between two employees	Completing instructions about downloading an app	

		Book 3				
	13	Cloud Computing: Types of Clouds	Reading a magazine article (multiple choice questions)	Listening to a conversation between an IT employee and a co-worker (true/false statements); Completing a conversation	Acting out a dialogue between an office employee and an IT specialist	Completing a report about cloud computing
	14	Cloud Computing: SaaS	Reading a website (multiple choice questions)	Listening to a conversation between an IT employee and a business owner (true/false statements); Completing a conversation	Acting out a dialogue between an IT employee and a business owner	Completing a memo about a new SaaS word processor
	15	Cloud Computing: IaaS and PaaS	Reading an advertisement (multiple choice questions)	Listening to a conversation between an IT company representative and a potential client (true/false statements); Completing a conversation	Acting out a dialogue between an IT company representative and a potential client	Writing a report about the web site solution stack that one's business offers

GRADE 12

Focus on developing communicative skills through interaction activities and strategies

Module 2 referred to in the Framework curriculum leading towards communicative competences in professional context and environment described by the following learning objectives:

- Can maintain effective communication within the team.
- Can lead effective business communication.
- Can use a foreign language in professional activities.
- Can communicate effectively with customers, both verbally and in writing.
- Can refer to various English resources in order to carry out the daily activities of the profession.
- Can use social networking and current communication applications effectively.

The learning/teaching process in all grades is closely linked to the internships/ practice of students in working contexts and the practical acquisition of vocational/professional skills in real-life work situations and in close familiarization of the routine and a range of standard work activities performed. The methodological message is that language learning should be directed towards enabling learners to act in real-life situations, expressing themselves and accomplishing tasks of different natures. Thus, the criterion suggested for assessment is communicative ability in real life, in relation to a continuum of ability (Levels A1-B1).

The basic approach in all grade sis **the action-oriented approach.** At the classroom level, there are several implications of implementing the action-oriented approach. Seeing learners as social agents implies involving them in the learning process, possibly with descriptors as a means of communication. The foreign language packs for each grade contain description of language skills using descriptors in the form of "can-do" statements. The approach also implies recognising the social nature of language learning and language use, namely the interaction between the social and the individual in the process of learning. Seeing learners as language users implies extensive use of the target language in the classroom – learning to use the language rather than just learning about the language (as a subject)[1]. Recommendation: language learning in all grades should be based on the real work tasks that student perform in their practice/internships and should be discussed, if possible, with their mentors/ teachers.

The action-oriented approach implies purposeful, collaborative **tasks** in the classroom, the primary focus of which is not language. If the primary focus of a task is not language, then there must be some other product or outcome (such as making an appointment, communication with a customer, performing an action, creating a product, taking part in a process, offering advice or discussing prices). Descriptors can be used to help design such tasks and also to observe and, if desired, to (self-)assess the language use of learners during the task. Interaction leads to co-construction of meaning and this has to be central to the learning and teaching process. This has clear implications for the classroom. At times, this interaction will be between teacher and learner(s), but at times, it will be of a

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[1] CEFR, Chapter 2.2. Implementing the action-oriented approach.

collaborative nature, between learners themselves. The precise balance between teacher-centred instruction and such collaborative interaction between learners in small groups is likely to reflect the context, the pedagogic tradition in that context and the proficiency level of the learners concerned.

In any communicative situation, general competences (for example, knowledge of the local context, knowledge of the work process and standard activities) are always combined with communicative language competences (linguistic, sociolinguistic and pragmatic competences: CEFR 2001 Section 5.2) and strategies (some general, some communicative language strategies). These are competences the foreign language teachers has to rely on as they are not expected to be expert in the area of vocational education. Teachers are advised to exploit existing knowledge and competences of student already acquired in their vocational classes and in turn develop them further.

Tasks often require some collaboration with others – hence the need for language. The example chosen in CEFR 2001 Chapter 2 to introduce this idea – moving – is one in which the use of language is only contingent on the task. In moving a wardrobe, some communication, preferably through language, is clearly advisable, but language is not the focus of the task. Similarly, tasks demanding greater sophistication of communication, such as agreeing on the preferred solution to a problem in functioning of a device, or serving a customer, focus on the task outcomes rather than the language used to achieve them.

The overall approach of the CEFR is summarised in a single paragraph:

Language use, embracing language learning, comprises the actions performed by persons who as individuals and as social agents develop a range of **competences**, both **general** and in particular **communicative language competences**. They draw on the competences at their disposal in various contexts under various **conditions** and under various **constraints** to engage in **language activities** involving **language processes** to produce and/or receive **texts** in relation to **themes** in specific **domains**, activating those **strategies** which seem most appropriate for carrying out the **tasks** to be accomplished. The monitoring of these actions by the participants leads to the reinforcement or modification of their competences. (CEFR 2001 Section 2.1)

In performing tasks, competences and strategies are mobilised in the performance and in turn further developed through that experience. In an "action-oriented approach" some collaborative tasks in the language classroom are therefore essential. This is why the CEFR 2001 includes a chapter on tasks. Additionally, you have in your packs a guide for construction of tasks, which you might find useful. CEFR 2001 Chapter 7 discusses real-life tasks and pedagogic tasks, possibilities for compromise between the two, factors that make tasks simple or complex from a language point of view, conditions and constraints. The precise form that tasks in the classroom may take, and the dominance that they should have in the programme, is for individual teachers to decide. No matter what perspective is adopted, it is implicit that tasks in the language classroom
should involve communicative language activities and strategies (CEFR 2001 Section 4.4) that also occur in the real world, like those students are asked to perform or observe in their practices/ internships.

Methodological tip

It is important to apply a methodological approach which does not accept that students have already achieved high competence level (B1 or even A2) in listening, speaking and written interaction. It is significant to start by confirming the acquisition of competences relevant for lower levels (A1 and A1+) and gradually progress to competences relevant for higher levels. Learners are different and it is important to convey the message that acquisition of any level, even A1+ is positive. The focus should be on what students *can do,* which means they can act effectively and perform tasks in real-life situations. The focus at this stage should not be on what students know (linguistic knowledge) but on *what students at various levels can do*.

The current methodological pack includes overview of all skill-based and language competence definitions relevant for the developed Vocational Framework Curricula. The highest potentially achievable level appropriate for the number of teaching and learning hours included in the Framework Curricula is B1 (independent level) at which the learner is beginning to use the language more independently and creatively. B1 is a level for independent user. However, it can be expected that not all students will reach and confirm the acquisition of competences at B1 level. Achieving basic user level (A1+ and A2) should be considered as a major achievement as at this level most of the standard, routine work tasks can be effectively performed.

Communication/ Interaction

Interaction, which involves two or more parties co-constructing discourse, is central to the learning/teaching process in 12th grade. Interpersonal interaction is considered to be the origin of language, with interpersonal, collaborative and transactional functions. Interaction is also fundamental in learning. The CEFR scales for interaction strategies reflect this with scales for turntaking, co-operating (= collaborative strategies) and asking for clarification. These basic interaction strategies are as important in collaborative learning as they are in real-world communication. The majority of the activities for interaction concern oral interaction. However, as pointed out in the Vocational Framework Curricula written interaction (= writing much as you would speak, in a slowed-down dialogue) has taken an increasingly significant role over the past 20 years. Therefore, the new category of online interaction has been developed and has to be specially focused upon.
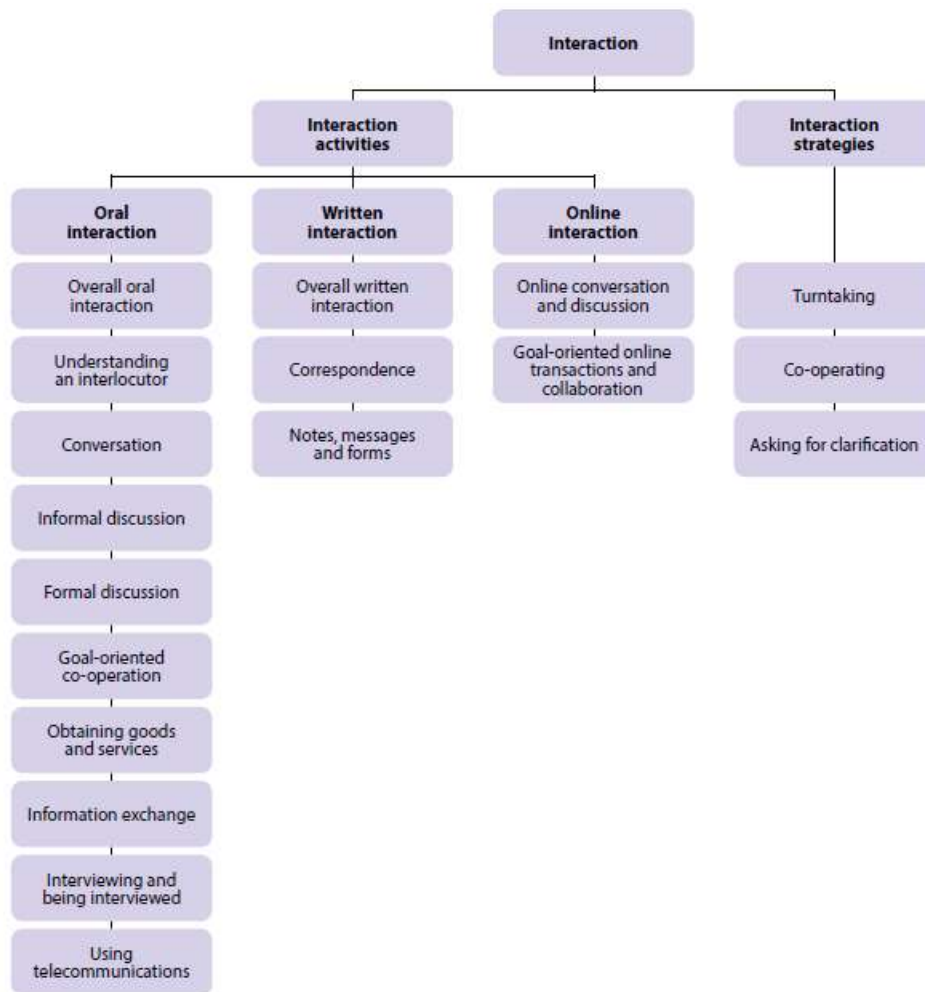
Fig. 1. Interactive activities and strategies (summary).

The activities (descriptors) begin with "Understanding an interlocutor". "Interlocutor" is a somewhat technical term that means the person with whom one is conversing directly in a dialogue.
Here are some explanations of the different categories or type of activities teachers should focus on.

B1	Can communicate with some confidence on familiar routine and non-routine matters related to their interests and professional field. Can exchange, check and confirm information, deal with less routine situations and explain why something is a problem. Can express thoughts on more abstract, cultural topics such as films, books, music, etc.
	Can exploit a wide range of simple language to deal with most situations likely to arise while travelling. Can enter unprepared into conversation on familiar topics, and express personal opinions and exchange information on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).
A2	Can interact with reasonable ease in structured situations and short conversations, provided the other person helps if necessary. Can manage simple, routine exchanges without undue effort; can ask and answer questions and exchange ideas and information on familiar topics in predictable everyday situations.
	Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters to do with work and free time. Can handle very short social exchanges but is rarely able to understand enough to keep conversation going of their own accord.
A1	Can interact in a simple way but communication is totally dependent on repetition at a slower rate, rephrasing and repair. Can ask and answer simple questions, initiate and respond to simple statements in areas of immediate need or on very familiar topics.
Pre-A1	Can ask and answer questions about themselves and daily routines, using short, formulaic expressions and relying on gestures to reinforce the information.

Understanding an interlocutor:

- understanding a person with whom you are conversing directly in an interaction, with the possibility of negotiating meaning. The aspects referred to here are:
  - topic and setting: from personal details and everyday needs to complex and abstract topics of a specialist nature;
  - degree of accommodation by the interlocutor: from sympathetic repetition and taking the trouble to help to just confirming details if the accent is less familiar.
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B1	Can follow clearly articulated speech/sign directed at them in everyday conversation, though will sometimes have to ask for repetition of particular words/signs and phrases.
A2	Can understand enough to manage simple, routine exchanges without undue effort. Can generally understand clear, standard speech/sign on familiar matters directed at them, provided they can ask for repetition or reformulation from time to time. Can understand what is said clearly, slowly and directly to them in simple everyday conversation; can be made to understand, if the interlocutor can take the trouble.
A1	Can understand everyday expressions aimed at the satisfaction of simple needs of a concrete type, delivered directly to them clearly and slowly, with repetition, by a sympathetic interlocutor. Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions.
Pre-A1	Can understand simple questions that directly concern them (e.g. name, age and address), if the person is asking slowly and clearly. Can understand simple personal information (e.g. name, age, place of residence, origin) when other people introduce themselves slowly and clearly, directly to them, and can understand questions on this theme addressed to them, though the questions may need to be repeated. Can understand a number of familiar words/signs and recognise key information (e.g. numbers, prices, dates and days of the week), provided the delivery is very slow, with repetition if necessary.

Conversation

- interaction with a primarily social function: the establishment and maintenance of personal relationships
  - o setting: from short exchanges, through maintaining a conversation and sustaining relationships, to flexible use for social purposes;
  - o topics: from personal news, through familiar topics of personal interest, to most general topics;
  - o language functions: from greetings, etc., through offers, invitations and permission, to degrees of emotion and allusive, joking usage.

B1	Can start up a conversation and help keep it going by asking people relatively spontaneous questions about a special experience or event, expressing reactions and opinions on familiar subjects. Can have relatively long conversations on subjects of common interest, provided the interlocutor makes an effort to support understanding. Can enter unprepared into conversations on familiar topics. Can follow clearly articulated language directed at them in everyday conversation, though will sometimes have to ask for repetition of particular words/signs. Can maintain a conversation or discussion but may sometimes be difficult to follow when trying to express exactly what they would like to. Can express and respond to feelings such as surprise, happiness, sadness, interest and indifference.
A2	Can establish social contact (e.g. greetings and farewells, introductions, giving thanks). Can generally understand clear, standard language on familiar matters directed at them, provided they can ask for repetition or reformulation from time to time. Can participate in short conversations in routine contexts on topics of interest. Can express how they feel in simple terms, and express thanks. Can ask for a favour (e.g. to borrow something), can offer a favour, and can respond if someone asks them to do a favour for them. Can handle very short social exchanges but is rarely able to understand enough to keep conversation going of their own accord, though they can be made to understand if the interlocutor will take the trouble. Can use simple, everyday, polite forms of greeting and address. Can converse in simple language with peers, colleagues or members of a host family, asking questions and understanding answers relating to most routine matters. Can make and respond to invitations, suggestions and apologies. Can express how they are feeling, using very basic stock expressions. Can state what they like and dislike.
A1	Can understand everyday expressions aimed at the satisfaction of simple needs of a concrete type, delivered directly to them in clear, slow and repeated language by a sympathetic interlocutor. Can take part in a simple conversation of a basic factual nature on a predictable topic (e.g. their home country, family, school). Can make an introduction and use basic greeting and leave-taking expressions. Can ask how people are and react to news.
Pre-A1	Can understand and use basic, formulaic expressions such as "Yes", "No", "Excuse me", "Please", "Thank you", "No thank you", "Sorry". Can recognise simple greetings. Can greet people, state their name and take leave in a simple way.

Informal discussion (with friends or members of the team)

- includes aspects of both the interpersonal and evaluative use of language, since these tend to be interwoven in everyday interaction.
    - o topics: from what to do and where to go, to abstract, complex and even unfamiliar topics and sensitive issues;
    - o ability to follow the discussion: from identifying the topic, through following the main points, to keeping up with animated discussion and understanding colloquial references;
    - o language functions: from discussing and (dis)agreeing in a limited way to expressing ideas with precision and dealing diplomatically with disagreement and criticism.

B1	Can follow much of what is said around them on general topics, provided interlocutors avoid very idiomatic usage and articulate clearly.
	Can express their thoughts about abstract or cultural topics such as music or films.
	Can explain why something is a problem.
	Can give brief comments on the views of others.
	Can compare and contrast alternatives, discussing what to do, where to go, who or which to choose, etc.
	Can generally follow the main points in an informal discussion with friends provided they articulate clearly in standard language or a familiar variety.
	Can give or seek personal views and opinions in discussing topics of interest.
	Can make their opinions and reactions understood as regards solutions to problems or practical questions of where to go, what to do, or how to organise an event (e.g. an outing).
	Can express beliefs, opinions and agreement and disagreement politely.
A2	Can generally identify the topic of discussion around them when it is conducted slowly and clearly.
	Can exchange opinions and compare things and people using simple language.
	Can discuss what to do in the evening or at the weekend.
	Can make and respond to suggestions.
	Can agree and disagree with others.
	Can discuss everyday practical issues in a simple way when addressed clearly, slowly and directly.
	Can discuss what to do, where to go and make arrangements to meet.
	Can express opinions in a limited way.
A1	Can exchange likes and dislikes for sports, foods, etc., using a limited repertoire of expressions, when addressed clearly, slowly and directly.
Pre-A1	No descriptors available

Formal discussion (meetings, instructions, briefings)

- more formal discussion, mainly in a professional context.
    - type of meeting and topics: from exchanges on practical problems to discussion of abstract, complex, unfamiliar issues;
    - ability to follow the discussion: from needing repetition and clarification to understanding points given prominence and keeping up with animated debate;
    - ability to contribute: from needing to rehearse and get help with formulation to probing, evaluating and challenging the contributions of others and arguing one's own position convincingly.

B1	Can follow much of what is said that is related to their field, provided interlocutors avoid very idiomatic usage and articulate clearly.
	Can put over a point of view clearly, but has difficulty engaging in debate.
	Can take part in routine formal discussion of familiar subjects which is clearly articulated in the standard form of the language or a familiar variety and which involves the exchange of factual information, receiving instructions or the discussion of solutions to practical problems.
	Can follow argumentation and discussion on a familiar or predictable topic, provided the points are made in relatively simple language and/or repeated, and opportunity is given for clarification.
A2	Can generally follow changes of topic in formal discussion related to their field which is conducted slowly and clearly.
	Can exchange relevant information and give their opinion on practical problems when asked directly, provided they receive some help with formulation and can ask for repetition of key points if necessary.
	Can express what they think about things when addressed directly in a formal meeting, provided they can ask for repetition of key points if necessary.
A1	*No descriptors available*
Pre-A1	*No descriptors available*

Goal-oriented co-operation

- collaborative, task-focused work, which is a daily occurrence in real life, especially in professional contexts.
    - following the discussion: from understanding simple instructions explained directly to them to understanding detailed instructions reliably;
    - active contribution to the work: from simply asking for things and giving things to speculating about causes and consequences and organising the entire task.

B1	Can follow what is said, though they may occasionally have to ask for repetition or clarification if the discussion is rapid or extended.
	Can explain why something is a problem, discuss what to do next, and compare and contrast alternatives.
	Can give brief comments on the views of others.
	Can generally follow what is said and, when necessary, repeat back part of what someone has said to confirm mutual understanding.
	Can make their opinions and reactions understood as regards possible solutions or the question of what to do next, giving brief reasons and explanations.
	Can invite others to give their views on how to proceed.
A2	Can understand enough to manage simple, routine tasks without undue effort, asking very simply for repetition when they do not understand.
	Can discuss what to do next, making and responding to suggestions, and asking for and giving directions.
	Can indicate when they are following and can be made to understand what is necessary, if the interlocutor takes the trouble.
	Can communicate in simple and routine tasks using simple phrases to ask for and provide things, to get simple information and to discuss what to do next.
A1	Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions.
	Can act on basic instructions that involve times, locations, numbers, etc.
	Can ask people for things, and give people things.

Obtaining goods and services

- service encounters in work contexts and in restaurants, shops, banks, etc.
    - types of situation: from simple everyday transactions to disputes about responsibility and sensitive transactions in public, professional or academic life;
    - getting service: from asking for food and drink to asking detailed questions about more complex services;
    - demanding satisfaction: from making a complaint (B1) to negotiating a solution to a dispute or a sensitive transaction.

B1	Can deal with most transactions likely to arise while travelling, arranging travel or accommodation, or dealing with authorities during a foreign visit. Can ask in a shop for an explanation of the difference between two or more products serving the same purpose, in order to make a decision, posing follow-up questions as necessary. Can cope with less routine situations in shops, post offices, banks, e.g. returning an unsatisfactory purchase. Can make a complaint. Can deal with most situations likely to arise when making travel arrangements through an agent or when actually travelling, e.g. asking a passenger where to get off for an unfamiliar destination.
A2	Can deal with common aspects of everyday living such as travel, lodging, eating and shopping. Can interact in predictable everyday situations (e.g. post office, station, shop), using a wide range of simple expressions. Can get all the information needed from a tourist office, as long as it is of a straightforward, non-specialised nature.
	Can ask for and provide everyday goods and services. Can get simple information about travel, use public transport (e.g. buses, trains, taxis), ask and give directions, and buy tickets. Can ask about things and make simple transactions in shops, post offices or banks. Can give and receive information about quantities, numbers, prices, etc. Can make simple purchases by stating what is wanted and asking the price. Can order a meal. Can point out when something is wrong (e.g. "The food is cold" or "There is no light in my room"). Can ask (face-to-face) for a medical appointment and understand the reply. Can indicate the nature of a problem to a health professional, perhaps using gestures and body language.
A1	Can ask people for things and give people things. Can ask for food and drink using basic expressions. Can handle numbers, quantities, cost and time.
Pre-A1	Can make simple purchases and/or order food or drink when pointing or other gesture can support the verbal reference.

Information exchange

- exchanging factual information
  - type of transaction: from simple questions, instructions and directions, through simple, routine exchanges, to exchanging information with other specialists;
  - type of information: from personal details, dates, prices, etc., through habits, routines, pastimes and straightforward factual information, to detailed and complex information or advice.

B1	Can exchange, check and confirm accumulated factual information on familiar routine and non-routine matters within their field with some confidence.
	Can summarise and give their opinion about a short story, article, talk, discussion, interview or documentary and answer further questions of detail.
	Can find out and pass on straightforward factual information.
	Can ask for and follow detailed directions.
	Can obtain more detailed information.
	Can offer advice on simple matters within their field of experience.
A2	Can understand enough to manage simple, routine exchanges without undue effort.
	Can deal with practical everyday demands: finding out and passing on straightforward factual information.
	Can ask and answer questions about habits and routines.
	Can ask and answer questions about pastimes and past activities.
	Can ask and answer questions about plans and intentions.
	Can give and follow simple directions and instructions, e.g. explain how to get somewhere.
	Can communicate in simple and routine tasks requiring a simple and direct exchange of information.
	Can exchange limited information on familiar and routine operational matters.
	Can ask and answer questions about what they do at work and in their free time.
	Can ask for and give directions referring to a map or plan.
	Can ask for and provide personal information.
	Can ask and answer simple questions about an event (e.g. ask where and when it took place, who was there and what it was like).
A1	Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions.
	Can ask and answer simple questions, initiate and respond to simple statements in areas of immediate need or on very familiar topics.
	Can ask and answer questions about themselves and other people, where they live, people they know, things they have.
	Can indicate time by lexicalised phrases like "next week", "last Friday", "in November", "3 o'clock".
	Can express numbers, quantities and cost in a limited way.
	Can name the colour of clothes or other familiar objects and can ask the colour of such objects.
Pre-A1	Can tell people their name and ask other people their names.
	Can use and understand simple numbers in everyday conversations.
	Can ask and tell what day, time of day and date it is.
	Can ask for and give a date of birth.
	Can ask for and give a phone number.
	Can tell people their age and ask people about their age.
	Can ask very simple questions for information, such as "What is this?" and understand one- or two-word/sign answers.

Interviewing and being interviewed

- the specialised roles associated with appointments and job applications as well as other forms of examination, general performance, etc.
  - independence from the interlocutor: from requiring direct, slow, clear standard language to acting without any support, at no disadvantage to the other person(s);
  - taking the initiative: from bringing up new subjects (B1) to participating fully, developing a point fluently and handling interjections well;
  - conducting the actual interview: from using a prepared questionnaire (B1), through departing spontaneously from prepared questions and following up and probing interesting replies, to structuring the discourse and interacting authoritatively.

B1	Can provide concrete information required in an interview/consultation (e.g. describe symptoms to a doctor), but with limited precision.
	Can carry out a prepared interview, checking and confirming information, though they may occasionally have to ask for repetition if the other person's response is rapid or extended.
	Can take some initiative in an interview/consultation (e.g. to bring up a new subject) but is very dependent on the interviewer in the interaction.
	Can describe symptoms in a simple way and ask for advice when using health services, and can understand the answer, provided this is given clearly in everyday language.
	Can use a prepared questionnaire to carry out a structured interview, with some spontaneous follow-up questions.
A2	Can make themselves understood in an interview and communicate ideas and information on familiar topics, provided they can ask for clarification occasionally, and are given some help to express what they want to.
	Can describe to a doctor very basic symptoms and ailments such as a cold or the flu.
	Can answer simple questions and respond to simple statements in an interview.
	Can indicate in simple language the nature of a problem to a health professional, perhaps using gestures and body language.
A1	Can reply in an interview to simple direct questions, put very slowly and clearly in direct, non-idiomatic language, about personal details.
	Can state in simple language the nature of a problem to a health professional and answer simple questions such as "Does that hurt?" even though they have to rely on gestures and body language to reinforce the message.

Using telecommunications

- use of the phone and internet-based apps for remote communication
    - range of information and transactions involved: from simple messages and conversations on predictable topics like arrival times, routine messages and basic services to use for a variety of personal and professional purposes;
    - interlocutor: from a known person to unknown persons with less familiar accents;
    - length of exchange: from short, simple exchanges to extended casual conversation.

B1	Can use telecommunications for everyday personal or professional purposes, provided they can ask for clarification from time to time.
	Can give important details over the (video)phone concerning an unexpected incident (e.g. a problem in a hotel, with travel arrangements, with a hire car).
	Can use telecommunications to have relatively simple but extended conversations with people they know personally.
	Can use telecommunications for routine messages (e.g. arrangements for a meeting) and to obtain basic services (e.g. book a hotel room or make a medical appointment).
A2	Can use telecommunications with their friends to exchange simple news, make plans and arrange to meet.
	Can, given repetition and clarifications, participate in a short, simple phone conversation with a known person on a predictable topic, e.g. arrival times, arrangements to meet.
	Can understand a simple message (e.g. "My flight is late. I will arrive at 10 o'clock."), confirm details of the message and pass it on by phone to other people concerned.

Written interaction

Written interaction concerns interactive communication through the medium of script. The number of formal and informal video-recorded chats and message exchanges has been rising rapidly, most notably through WhatsApp. In some countries, signers can now send enquiries, comments and complaints to certain service providers through a dedicated web portal. Most interactive situations are tolerant of some error and confusion and have some contextual support. There is usually an opportunity to use interaction strategies like asking for clarification or asking for help with formulation and to repair misunderstandings. The requirement to produce carefully structured, accurate text is less of a priority.

B1	Can convey information and ideas on abstract as well as concrete topics, check information, and ask about or explain problems with reasonable precision.
	Can compose personal letters and notes asking for or conveying simple information of immediate relevance, getting across the point they feel to be important.
A2	Can compose short, simple formulaic notes relating to matters in areas of immediate need.
A1	Can ask for or pass on personal details.
Pre-A1	Can convey basic information (e.g. name, address, family) in short phrases on a form or in a note, with the use of a dictionary.

Correspondence

Personal and formal correspondence, since this is an activity that some user/learners need to carry out.

- type of message: from simple, personal messages, to in-depth, personal and professional correspondence;
- type of language: from formulaic expressions to emotional, allusive and joking usage and writing with good expression in an appropriate tone and style.

B1	Can compose personal letters giving news and expressing thoughts about abstract or cultural topics such as music or film. Can compose letters expressing different opinions and giving detailed accounts of personal feelings and experiences. Can reply to an advertisement in writing and ask for further information on items that interest them. Can compose basic formal e-mails/letters (e.g. to make a complaint and request action).
	Can compose personal letters describing experiences, feelings and events in some detail. Can compose basic e-mails/letters of a factual nature (e.g. to request information or to ask for and give confirmation). Can compose a basic letter of application with limited supporting details.
A2	Can exchange information by text message, by e-mail or in short letters, responding to questions from the other person (e.g. about a new product or activity).
	Can convey personal information of a routine nature, for example in a short e-mail or letter introducing themselves. Can compose very simple personal letters expressing thanks and apology. Can compose short, simple notes, e-mails and text messages (e.g. to send or reply to an invitation, to confirm or change an arrangement). Can compose a short text in a greetings card (e.g. for someone's birthday or to wish them a Happy New Year).
A1	Can compose messages and online postings as a series of very short sentences about hobbies and likes/dislikes, using simple words and formulaic expressions, with reference to a dictionary. Can compose a short, simple postcard. Can compose a short, very simple message (e.g. a text message) to friends to give them a piece of information or to ask them a question.
Pre-A1	Can convey basic personal information in short phrases and sentences, with reference to a dictionary.

Notes, messages and forms

This encompasses a range of transactional interactive writing. At the A levels it includes filling in forms with personal details. From A2 the focus is on taking or leaving messages and writing/signing short notes.

- filling in forms with personal details (Pre-A1 to A2);
- leaving and taking messages, from simple messages about time, through messages containing several points, to complex personal or professional messages;
- formulating notes: from short and simple to more developed notes to friends, service people, teachers, etc.

B1	Can take routine messages that are likely to occur in a personal, professional or academic context.
	Can take messages communicating enquiries and explaining problems.
	Can formulate notes conveying simple information of immediate relevance to friends, service people, teachers and others who feature in their everyday life, getting across comprehensibly the points they feel are important.
	Can take messages over the phone containing several points, provided the caller dictates these clearly and sympathetically.
A2	Can take a short, simple message provided they can ask for repetition and reformulation.
	Can formulate short, simple notes and messages relating to matters in areas of immediate need.
	Can fill in personal and other details on most everyday forms (e.g. to open a bank account, or to send a letter by recorded delivery).
A1	Can fill in numbers and dates, own name, nationality, address, age, date of birth or arrival in the country, etc., e.g. on a hotel registration form.
	Can leave a simple message giving information regarding for instance where they have gone, or what time they will be back (e.g. "Shopping: back at 5 p.m.").
Pre-A1	Can fill in very simple registration forms with basic personal details: name, address, nationality, marital status.

Online interaction

Online communication is always mediated through a machine, which implies that it is unlikely ever to be exactly the same as face-to-face interaction. There are emergent properties of group interaction online that are almost impossible to capture in traditional competence scales focusing on the individual's behaviour in speech, signing or in writing. For instance, there is an availability of resources shared in real time. On the other hand, there may be misunderstandings that are not spotted (and corrected) immediately, as is often easier with face-to-face communication.

Some requirements for successful communication are:
- the need for more redundancy in messages;
- the need to check that the message has been correctly understood;
- ability to reformulate in order to help comprehension and deal with misunderstandings;
- ability to handle emotional reactions.

Online conversation and discussion

- conversation and discussion online as a multimodal phenomenon, with an emphasis on how interlocutors communicate online to handle both serious issues and social exchanges in an open-ended way.
    - instances of simultaneous (real-time) and consecutive interaction, the latter allowing time to prepare a draft and/or consult aids;
    - participation in sustained interaction with one or more interlocutors;
    - composing posts and contributions for others to respond to;
    - comments (for example, evaluative) on the posts, comments and contributions of others;
    - reactions to embedded media;
    - the ability to include symbols, images and other codes to make the message convey tone, stress and prosody, but also the affective/emotional side, irony, etc.

B1	Can engage in real-time online exchanges with more than one participant, recognising the communicative intentions of each contributor, but may not understand details or implications without further explanation.
	Can post online accounts of social events, experiences and activities referring to embedded links and media and sharing personal feelings.
	Can post a comprehensible contribution in an online discussion on a familiar topic of interest, provided they can prepare the text beforehand and use online tools to fill gaps in language and check accuracy.
	Can make personal online postings about experiences, feelings and events and respond individually to the comments of others in some detail, though lexical limitations sometimes cause repetition and inappropriate formulation.
A2+	Can introduce themselves and manage simple exchanges online, asking and answering questions and exchanging ideas on predictable everyday topics, provided enough time is allowed to formulate responses, and that they interact with one interlocutor at a time.
	Can make short descriptive online postings about everyday matters, social activities and feelings, with simple key details.
	Can comment on other people's online postings, provided they are written/signed in simple language, reacting to embedded media by expressing feelings of surprise, interest and indifference in a simple way.
A2	Can engage in basic social communication online (e.g. a simple message on a virtual card for special occasions, sharing news and making/confirming arrangements to meet).
	Can make brief positive or negative comments online about embedded links and media using a repertoire of basic language, though they will generally have to refer to an online translation tool and other resources.
A1	Can formulate very simple messages and personal online postings as a series of very short sentences about hobbies, likes/dislikes, etc., relying on the aid of a translation tool.
	Can use formulaic expressions and combinations of simple words/signs to post short positive and negative reactions to simple online postings and their embedded links and media, and can respond to further comments with standard expressions of thanks and apology.
Pre-A1	Can post simple online greetings, using basic formulaic expressions and emoticons.
	Can post online short simple statements about themselves (e.g. relationship status, nationality, occupation), provided they can select them from a menu and/or refer to an online translation tool.

A user/learner will struggle to interact successfully in an online meeting until they reach the B levels, will be able to interact in a virtual "classroom" at A2 only if carefully guided, and maybe can communicate only very superficially at A1 when posting and chatting in the "cafe".

Goal-oriented online transactions and collaborations

- potentially collaborative nature of online interaction and transactions that have specific goals, as a regular feature of contemporary life.

B1	Can engage in online transactions that require an extended exchange of information, provided the interlocutor(s) avoid complex language and are willing to repeat and reformulate when necessary. Can interact online with a group that is working on a project, following straightforward instructions, seeking clarification and helping to accomplish the shared tasks.
	Can engage in online collaborative or transactional exchanges that require simple clarification or explanation of relevant details, such as registering for a course, tour or event, or applying for membership. Can interact online with a partner or small group working on a project, provided there are visual aids such as images, statistics and graphs to clarify more complex concepts. Can respond to instructions and ask questions or request clarifications in order to accomplish a shared task online.
A2	Can use formulaic language to respond to routine problems arising in online transactions (e.g. concerning availability of models and special offers, delivery dates, addresses). Can interact online with a supportive partner in a simple collaborative task, responding to basic instructions and seeking clarification, provided there are visual aids such as images, statistics or graphs to clarify the concepts involved.
	Can make simple online transactions (e.g. ordering goods or enrolling in a course) by filling in an online form or questionnaire, providing personal details and confirming acceptance of terms and conditions, declining extra services, etc. Can ask basic questions about the availability of a product or feature. Can respond to simple instructions and ask simple questions in order to accomplish a shared task online with the help of a supportive interlocutor.
A1	Can complete a very simple online purchase or application, providing basic personal information (e.g. name, e-mail or telephone number).
Pre-A1	Can make selections (e.g. choosing a product, size, colour) in a simple online purchase or application form, provided there is visual support.

The move towards higher levels expands from basic transactions and information exchange at the A levels towards more sophisticated collaborative project work that is goal-oriented. This can be seen as a progression from filling in predictable online forms at Pre-A1, to solving various problems in order for the transaction to take place at the B levels. Simple collaborative tasks appear at A2+, with a co-operative interlocutor, or with small group project work from B1.

Interaction strategies

Interaction strategies are linked to developing pragmatic competences. They include: "Taking the floor" ("Turntaking"), "Co-operating" and "Asking for clarification".

They are also introduced at higher levels that A1.

Asking for clarification (can be first introduced)

A1
- Can indicate with simple words/signs, intonation and gestures that they do not understand.
- Can express in a simple way that they do not understand.

A2
- Can ask very simply for repetition when they do not understand.
- Can ask for clarification about key words/signs or phrases not understood, using stock phrases.
- Can indicate that they did not follow.
- Can signal non-understanding and ask for a word/sign to be spelt out.

B1
- Can ask for further details and clarifications from other group members in order to move a discussion forward.
- Can ask someone to clarify or elaborate what they have just said.

Taking the floor

A2
- Can use simple techniques to start, maintain or end a short conversation.
- Can initiate, maintain and close simple, face-to-face conversation.
- Can ask for attention.

B1
- Can intervene in a discussion on a familiar topic, using a suitable phrase to get the floor.
- Can initiate, maintain and close simple, face-to-face conversation on topics that are familiar or of personal interest.

Co-operating

A2

- Can indicate when they are following.

B1

- Can repeat back part of what someone has said to confirm mutual understanding and help keep the development of ideas on course.
- Can invite others into the discussion.

Additional suggestions

Application of the VAK model

Activities can be a major contribution to the success of a class. In addition to reinforcing and consolidating grammar rules and vocabulary, and encouraging learners to speak freely, activities can be a tool for reaching different learner types. When we create activities, we need to keep in mind the diversity of our classrooms.

Real learning occurs when we address our learners' needs and preferences, helping to create the motivation for them to participate in the activities which we offer them. They need to develop a sense of personal accountability making them responsible for their own learning. In order to do this, they need to become involved in the learning process as well as the material to be learned. By recognising our learners as individuals and helping them to reach their objectives in learning a foreign language, we provide them with the basics of a learning atmosphere which puts them into a learning state. Students who are confronted with new material as well as adults who have been working hard outside the classroom are grateful for activities which are varied, interesting and fun.

The VAK model uses materials which allow different types of learners (visual, auditory, and kinaesthetic motoric and kinaesthetic emotional learners) to perceive, process and recall information through one of these sensory channels. By creating
- activities which include pictures, words, and movement;
- activities which can be done in group work by communicating with others, or alone by thinking and reflecting;
- activities which are to be approached systematically or in a more random style,

the chances of reaching learners of all types are greatly increased. The activities also help us to create both a supportive and energetic atmosphere in the classroom.

These visual, auditory and kinaesthetic channels are often seen as filters which help us to perceive the world around us. They refer to the way we take in, store and recall information.

Here is how the benefit for the different types of learners is explained in the introduction of *Communicative Business English Activities*, by Marjorie Rosenberg, Express Publishing, 2018.

The book applies this method and provides a number of appropriate relevant activities to perform in class in all grades.

Visual learners like to see things written down. They enjoy activities with pictures or words they can see and enjoy putting things into categories. They may remember where they have seen something so activities which make use of putting things in a different order can help them to remember better later.

Auditory learners need to listen or speak. They enjoy activities where they can exchange information orally with a partner or in a group. As they tend to learn sequentially, it is helpful for them to change the order of what they have learned, an element built into these activities.

Kinaesthetic motoric learners need to try things out for themselves. They learn by doing and through real-life experiences. They also enjoy activities using flashcards, role plays and board games. They often learn by moving about so having activities which combine movement and words can help them to recall the material later when they need it.

Kinaesthetic emotional learners rely on their feelings and need to connect what they learn with both positive and personal experiences. They like to be creative and imaginative, important aspects of these flexible activities. As they may need to separate themselves from their emotions, taking on a new role and observing themselves from outside the situation can be helpful for them in the learning process.

Teacher's Guides to the Express Publishing Textbooks include specially designed activities for communication and interaction under the rubric Ending the class/Rounding up. For example:

Activities with a focus on vocabulary involving communicative activities among students (moving, talking, collaborating, word hunt, guessing, etc.)

Review the unit vocabulary

- Write down the vocabulary on separate pieces of paper and keep the words in one pile. Write the definitions of the vocabulary on separate pieces of paper. Keep the definitions in another pile. Give each student one of the words/phrases rom the unit and one of the definitions. Make sure that they do not match up. Tell students to ask each other for the definitions for their words/phrases but not to read their definitions to the other students. Do not allow students to show each other the slips of paper that they have. If a student has the definition that the other students asks for, he/she should give it to them. When all students have the definitions for their words/phrases, have each one read them out and check if they are correct. Then invite volunteers to make sentences with teh words/phrase they have. Continue until all of the students have read their words and definitions. (examples of the activity Computing, Express Publishing, Book 2 Unit 3, Rounding up before Exercise 9 Writing)
- Split the class into two teams. Have one person from each team sit with their back facing the board. Write a vocabulary word on the board (user, organize, GUI (Graphical User Interface), desktop, right-clock, dropdown, menu, folder, cursor, select, icon). The first person with their back facing the board to guess the correct answer gets one point for their team. Switch the students who are guessing. Continue until you have reviewed all of the vocabulary. (example of the activity Computing, Express Publishing, Book 1 Unit 11 Rounding up after Exercise 9 Writing)
- Split the class into teams. With books closed have students take turns to say as many vocabulary items as they can remember from the unit and give their definitions. Each correct word gets a point and the team with the most points when you have reviewed all of the vocabulary wins. (example of the activity Computing, Express Publishing, Book 1 Unit 3 rounding up after Exercise 9 Writing)
- Ask a volunteer to come up to the board and write a word/phrase from the unit and its definition. The rest of the class decides if it is correct before the next students comes to the board and does the same. Continue until all of the unit vocabulary has been reviewed. (example of the activity Computing, Express Publishing, Book 1 Unit 5 rounding up after Exercise 9 Writing)
- Draw a pyramid on the board. Make sure that the pyramid has the same number of squares as there are words in the unit. Number the squares on the pyramid on the board. Split students into pairs. Tell both students to copy down the pyramid. Have Student A write down one word in each square. Instruct Student A not to show

Student B his/her pyramid. Student A should describe each of the words without saying the word. Student B should write down the word he/she thinks Student A is describing in the corresponding square. Tell students that they have two minutes to write down as many of the words as possible. When students have finished, have them compare the pyramids. Then have students switch roles and repeat. When all of the pairs have finished, invite volunteers to share their pyramids with the class. (examples of the activity Computing, Express Publishing, Book 1 Unit 10 Rounding up after Exercise 9 Writing,)

- Split the students into groups of three or four. Invite one member from each group to the board. Tell them a word. Instruct the students at the board to each write a sentence using the word. Remind students that the sentence must show that they understand the meaning of the word. When the students have finished writing their sentences, they must sit down. Then their teammates have the chance to correct the sentence or approve it. After one of the teams approves the sentence, all of the teams must stop working. As a class, check each of the teams' sentences. Each team that uses the word correctly gets a point. Repeat with different students at the board. Continue until all of the vocabulary has been reviewed. The team with the most points wins. (example of the activity Computing, Express Publishing, Book 1 Unit 15 Rounding up after Exercise 9 Writing)
- Write the definitions of the vocabulary on separate pieces of paper. Make two sets of definitions. Split the class into two teams. Put one set of definitions face down in front of each team. Have the student sin each team line up one behind the other . Write one list of vocabulary on the board in front of each team. The first person in each team should pick a definition from his/her team's pile and tape it next to the correct word/phrase on the board. He/She should run to the end of their line. The next student on the team should do the same. Continue unril one of the teams has finished. Then, check the vocabulary and the definitions. If the team matches all of them correctly, it is the winner. If not, continue until one of the teams matches them all correctly. (example of the activity Computing, Express Publishing, Book 2 Unit 12 Rounding up after Exercise 9 Writing)
- Divide the students into two teams. Have one student from each team come to the front of the room. Call out one of the vocabulary words. The first student who slaps the desk gets the opportunity to say the definition of the word. If the student gets the definition correct, his/her team gets a point. If he/she gets the definition incorrect, his/her team loses a point and the other team gets the chance to define the word a steal a point. The player that defines the word gets the opportunity to get a bonus point using the word in a sentence correctly. Switch players that are at the front of the room. Repeat until all of the vocabulary words have been reviewed. The team with the most points wins. (example of the activity Computing, Express Publishing, Book 1 Unit 12 Rounding up after Exercise Writing)
Have students stand in a circle. Play music and have the students throw a paper ball around the circle. Pause the music and call out a word. The students that is holding the ball must define the word. If he/she defines the word correctly, he/she should continue standing in the circle. If he/she defines the word incorrectly, he/she must sit down. Continue until all the vocabulary has been defined correctly. Alternatively, you may have students use the words in sentences instead of defining them.

(example of the activity Computing, Express Publishing, Book 2 Unit 8 Rounding up after 8 Exercise 9 Writing)

For more examples for Review of unit vocabulary activities consult the relevant Teacher's Guide.

Delivery of Foreign Language in Occupation: Packages of Learning materials, Computer technical services / Software and web operations

173

GLOSSARY

(Book 1)

affiliate [N-COUNT-U15] An affiliate is a person or business that directs Internet traffic to a business's website in exchange for a percentage of sales. / συνεργάτης

appearance [N-COUNT-U12] Appearance is the way that a web page looks. / εμφάνιση

attachment [N-COUNT-U8] An attachment is a file that is sent with an email. / συνημμένο αρχείο (που αποστέλλεται με ηλεκτρονικό ταχυδρομείο)

bandwidth [N-UNCOUNT-U14] Bandwidth is a measurement of the amount of information that a computer network can send or receive. High bandwidth allows images and websites to load quickly on the Internet. / εύρος ζώνης (για μεταφορά αρχείου)

banner [N-COUNT-U15] A banner is a rectangular graphic on a website that advertises a business. / διαφήμιση (σε ιστοσελίδα)

brick and mortar [N-COUNT-U15] A brick and mortar is a business that operates in a physical location instead of online. / πραγματικό κατάστημα, μη διαδικτυακό κατάστημα

case [N-COUNT-U3] A case is an enclosure that holds the computer's components. / περίβλημα, κουτί του υπολογιστή

CAT-5 (Category 5) cables [N-COUNT-U5] CAT-5 cables are the standard cables that connect computers to networks. / καλώδια δικτύου κατηγορίας 5 (για σύνδεση του υπολογιστή με το δίκτυο)

cell [N-COUNT-U11] A cell is a unit of a spreadsheet that holds a piece of information. / κελί (σε υπολογιστικό φύλλο Excel)

certificate authority [N-COUNT-U15] A certificate authority creates, offers and verifies reliable digital certificates. / αρχή πιστοποίησης

clip art [N-UNCOUNT-U13] Clip art is electronic artwork that can be used in publications. / έτοιμη εικόνα

code [N-COUNT-U1] Code is a set of words and signs that give instructions to a computer. / κώδικας

codec [N-COUNT-U14] A codec is a piece of videoconferencing equipment. It codes signals that go out and reads signals that come in. / αποκωδικοποιητής (για τηλεδιασκέψεις)

coding [N-COUNT-U12] Coding is the programming language that makes up a website. / γλώσσα δημιουργίας ιστοσελίδας

compatibility [N-UNCOUNT-U7] Compatibility is the ability of one program or file to work with a different program. / συμβατότητα

comprehensive layout [N-UNCOUNT-U13] A comprehensive layout is a nearly complete version of a publication. / μακέτα υπό έγκριση

computer [N-COUNT-U2] A computer is an electronic device that manipulates data. / ηλεκτρονικός υπολογιστής

configuration [N-COUNT-U5] The configuration of a network is the group of settings that control how information is sent and received on a network. / ρυθμίσεις παραμέτρων δικτύου

content [N-UNCOUNT-U12] Content is the material on a web page, including text and graphics. / περιεχόμενο

contrast [N-UNCOUNT-U10] Contrast is the amount of difference between the dark areas and light areas of an image. / αντίθεση

crop [V-COUNT-U10] To crop is to cut off unwanted parts of an image. / αποκόπτω (τα μέρη από μια εικόνα που δε χρειάζονται)

CSS [N-UNCOUNT-U12] CSS (Cascading Style Sheets) is a simple language that decides how a web page looks. / γλώσσα για την εμφάνιση μιας ιστοσελίδας

cycle [V-UNCOUNT-U5] To cycle a device on a network means to turn it off and then turn it on again or to unplug it from its power source. / κάνω πλήρη τερματισμό και επανεκκίνηση ενός συστήματος ή μιας εφαρμογής

data [N-UNCOUNT-U1] Data are numbers that can be entered into a computer. / δεδομένα

data processing [N-UNCOUNT-U1] Data processing is the act of entering, using or manipulating data with computers. / επεξεργασία δεδομένων

database [N-COUNT-U11] A database is a large group of data organized in a computer system. It allows you to search and find information easily. / βάση δεδομένων

dedicated system [N-COUNT-U14] A dedicated system includes all the necessary components of videoconferencing together as a set. / σύστημα για μια λειτουργία (π.χ. τηλεδιάσκεψη)

desktop [N-COUNT-U6] A computer desktop is everything that a user sees on a computer screen. / επιφάνεια εργασίας

desktop computer [N-COUNT-U2] A desktop computer is a computer that is small enough to use at a desk, but too big to carry around. / ηλεκτρονικός υπολογιστής

desktop publishing software [N-UNCOUNT-U13] Desktop publishing software is a computer program that is used to make page layouts. / λογισμικό για σχεδιασμό σελίδων σε ηλεκτρονικό υπολογιστή

desktop publishing [N-UNCOUNT-U13] Desktop publishing is art of using computers to design finished, printable documents. / σχεδιασμός σελίδων σε ηλεκτρονικό υπολογιστή

DHCP (Dynamic Host Configuration Protocol) [N-COUNT-U5] The DHCP (Dynamic Host Configuration Protocol) is a system for computer networks to receive IP addresses and other configuration information. / Πρωτόκολλο Δυναμικής Καταχώρισης Διευθύνσεων υπολογιστών

digital certificate [N-COUNT-U15] A digital certificate is an electronic document that proves an online business or person is who that business or person claims to be. / ψηφιακό πιστοποιητικό

disk drive [N-COUNT-U3] A disk drive reads information from a magnetic spinning disc. / σύστημα ανάγνωσης δισκέτας ηλεκτρονικού υπολογιστή

document [N-COUNT-U7] A document is a file created on a word processing program. / έγγραφο

document sharing [N-UNCOUNT-U14] Document sharing is a feature of some videoconferencing systems. It allows everyone participating in the videoconference to look at and edit the same document. / κοινή χρήση εγγράφων

domain name [N-COUNT-U8] A domain name is a set of words and letters that identify a company or address on the Internet. / ηλεκτρονικό όνομα τομέα/εταιρείας

1

Career Paths: Information Technology – Glossary

drag [V-UNCOUNT-U6] To drag files, folders or icons is to move them around on a desktop. / μεταφέρω ένα αρχείο σ' έναν άλλο φάκελο

e-commerce [N-UNCOUNT-U15] E-commerce is the purchase or sale of items on the Internet. / ηλεκτρονικό εμπόριο

echo-cancellation [N-UNCOUNT-U14] Echo-cancellation is a process that reduces the amount of echo heard by participants of a videoconference. / ακύρωση ηχούς

electronic page [N-COUNT-U13] An electronic page is a computerized version of a piece of paper. / ηλεκτρονική σελίδα

electronic paper [N-COUNT-U13] Electronic paper is a special digital screen that can be read like paper. / ηλεκτρονικό χαρτί

electrostatic printing [N-UNCOUNT-U13] Electrostatic printing is a method that uses the forces of electricity to print. / ηλεκτροστατική εκτύπωση

email address [N-COUNT-U8] An email address is a location to which electronic messages can be delivered. / ηλεκτρονική διεύθυνση αλληλογραφίας

email client [N-COUNT-U8] An email client is a program that receives, sends and stores email on a computer. / λογισμικό διαχείρισης ηλεκτρονικής αλληλογραφίας

encoding [N-UNCOUNT-U1] Encoding is the act of changing data so that no one can read it until it is changed again. / κωδικοποίηση

expansion cards [N-COUNT-U3] Expansion cards are extra circuit boards that are used to increase the functions of a computer. / κάρτες επέκτασης

exposure [N-COUNT-U10] An exposure is the length of time film is open to light when taking a picture. / χρόνος έκθεσης του φιλμ στο φως για να τραβηχτεί μια φωτογραφία

fan [N-COUNT-U3] A fan moves cool air onto computer components inside the case. / ανεμιστήρας ψύξης

FAQ [N-COUNT-U15] FAQ (Frequently Asked Questions) are a set of questions and answers that are provided on a website to provide users with information that users commonly want to know. / Συχνές Ερωτήσεις

field [N-COUNT-U11] A field is a category in a database that holds a particular type of information. / πεδίο πληροφοριών σε υπολογιστικό φύλλο ή βάση δεδομένων

folder [N-COUNT-U6] A folder holds and organizes files and documents on a computer. / φάκελος αρχείων

font [N-COUNT-U7] Font is the style of the typed characters on a document. / γραμματοσειρά

format [N-COUNT-U7] A format is a file's type. Different files might not work in different programs. / μορφή αρχείου

formatting [N-UNCOUNT-U7] Formatting is the design of the words on a document. / μορφοποίηση

formula [N-COUNT-U11] A formula is any mathematical calculation that you perform in a spreadsheet. / τύπος (π.χ. στα μαθηματικά, στη φυσική κ.λπ.)

function [N-COUNT-U11] A function is a mathematical instruction that performs a specific calculation in a spreadsheet, such as adding a set of values. / μαθηματική συνάρτηση

functionality [N-COUNT-U12] Functionality is the ability of different elements of a website to work together. / λειτουργική δυνατότητα

graphic communications [N-UNCOUNT-U13] Graphic communications is the study of sending and receiving visual messages. / χρήση γραφικών για μεταφορά ηλεκτρονικών μηνυμάτων

graphic editing program [N-COUNT-U10] A graphic editing program is a computer program that lets you change different aspects of an image. / πρόγραμμα επεξεργασίας γραφικών

Graphical User Interface [N-COUNT-U6] A graphical user interface (GUI) is an operating system that uses icons to represent programs and files and allow users to access them. / Γραφικό Περιβάλλον Χρήστη

graphics [N-COUNT-U10] Graphics are images on a computer, in a book or magazine, etc. / τα γραφικά του ηλεκτρονικού υπολογιστή

hard drive [N-COUNT-U3] A hard drive stores data electronically. / σκληρός δίσκος

hardware [N-COUNT-U1] Hardware refers to the physical parts of a computer. / το υλισμικό του ηλεκτρονικού υπολογιστή

heat sink [N-COUNT-U3] A heat sink transfers heat away from nearby components of a computer. / ψύκτης υπολογιστή

HTML [N-UNCOUNT-U9] HTML (Hypertext Markup Language) is a computer language that is used to construct web sites on the Internet. / Γλώσσα Προγραμματισμού

http [N-UNCOUNT-U9] An http is a part of an Internet address that allows a computer to connect to the site. / τμήμα διεύθυνσης στο διαδίκτυο

hyperlink [N-COUNT-U9] A hyperlink is a word or image on a web page that you can click on to go to a different web page. / υπερσύνδεση

icon [N-COUNT-U6] An icon is a picture that represents something on a computer. / εικονίδιο

information security [N-COUNT-U1] Information security is the act or process of keeping information safe and preventing others from seeing it. / ασφάλεια πληροφοριών

Internet [N-UNCOUNT-U5] The Internet is a worldwide network of computers. / διαδίκτυο

IP address [N-COUNT-U5] An IP (Internet Protocol) address is a group of numbers that identify a computer on a network. / κωδικός ταυτότητας ενός υπολογιστή

ISP [N-COUNT-U8] An ISP (Internet Service Provider) is a company that gives its customers access to the Internet, email addresses and data storage. / Πάροχος Υπηρεσιών Διαδικτύου

JPEG [N-UNCOUNT-U10] JPEG (Joint Photographic Experts Group) is a kind of computer file used to store pictures on a computer. / Αρχείο Αποθήκευσης Φωτογραφιών

keyboard [N-COUNT-U4] A keyboard is a set of buttons that is used to enter information into a computer. / πληκτρολόγιο

laptop [N-COUNT-U2] A laptop is a computer that is small enough for you to carry around and use anywhere. / φορητός υπολογιστής

2

layout [N-COUNT-U7] Layout is the way that items are arranged on a document. / δομή εγγράφου

LCD [N-COUNT-U4] An LCD (Liquid Crystal Display) is a type of display that is created by liquid crystals and that is used in thin monitors. / οθόνη υγρών κρυστάλλων

local area network (LAN) [N-COUNT-U5] A local area network is a network that connects a small group of computers. / τοπικό δίκτυο

macro [N-COUNT-U7] A macro is a short keystroke that performs a predetermined action. / μακροεντολή

mainframe [N-COUNT-U2] A mainframe is a very powerful computer that can process large amounts of data. / κεντρικός υπολογιστής με μεγάλες δυνατότητες

maximize [V-UNCOUNT-U6] To maximize a window is to make it fill an entire computer screen or desktop. / μεγεθύνω (ένα παράθυρο εφαρμογής μέχρι να καλύψει ολόκληρη την οθόνη του υπολογιστή)

meta tag [N-COUNT-U9] A meta tag is text that is used in the codes of a web page to provide information about the site to search engines. / ετικέτα μετακειμένου (τίτλος που δίνει ο χρήστης σε μια σελίδα του)

microphone [N-COUNT-U4] A microphone is a device that is used to record sound. / μικρόφωνο

minimize [V-UNCOUNT-U6] To minimize a window is to make it leave the screen without closing the window. / μικραίνω (ένα παράθυρο εφαρμογής χωρίς να το κλείσω)

monitor [N-COUNT-U4-U14] A monitor is a screen that displays text, video, or images. / οθόνη

motherboard [N-COUNT-U3] A motherboard is a firm slotted board onto which computer circuitry is attached. / μητρική κάρτα υπολογιστή

mouse [N-COUNT-U4] A mouse is a small device that is used to move the cursor and select items on a computer screen. / ποντίκι υπολογιστή

multipoint videoconference [N-COUNT-U14] A multipoint videoconference is a videoconference among people in three or more different locations. / τηλεδιάσκεψη μεταξύ ατόμων από πολλές διαφορετικές περιοχές

navigation [N-COUNT-U12] Navigation is the act of using and finding things on a website. / περιήγηση στο διαδίκτυο

network [N-COUNT-U5] A network is a group of computers that are connected in order to share data or communicate. / δίκτυο

offset lithography [N-UNCOUNT-U13] Offset lithography is a common form of printing. / λιθογραφική μέθοδος εκτύπωσης όφσετ

online [ADJ-COUNT-U1] If a computer is online, it is connected to the Internet. / συνδεδεμένος στο διαδίκτυο

operating system (OS) [N-COUNT-U6] The operating system is the software that controls a computer. / λειτουργικό σύστημα

operator [N-COUNT-U11] An operator is a symbol in a formula that performs a particular calculation, such as a plus sign (+). / τελεστής

page layout [V-INT-U13] Page layout is the process of arranging text and graphics on a page. / διάταξη σελίδας

page view [N-COUNT-U15] A page view is a request from a computer to load a page of a web site. They can be counted to analyze the number of people viewing a website. / προβολή σελίδας

password [N-COUNT-U8] A password is a set of letters and/or numbers that allow someone to use or access something on a computer. / κωδικός πρόσβασης

peripheral [N-COUNT-U4] A peripheral is a device that can be connected to a computer. / περιφερειακή συσκευή

pixel [N-COUNT-U10] A pixel is one of the small dots that make up an image on a computer or television screen. / εικονοστοιχείο, εικονοψηφίδα

pointer [N-COUNT-U6] A pointer is a small arrow that lets a user choose what to do on a computer. / δείκτης

POP3 [N-COUNT-U8] A POP3 (Post Office Protocol) is a method that allows computer users to receive email from a server. / πρωτόκολλο παραλαβής ταχυδρομείου

power supply [N-COUNT-U3] A power supply delivers electricity to all parts of a computer. / παροχή ηλεκτρικού ρεύματος

printer [N-COUNT-U4] A printer is a device that is used by a computer to transfer ink onto paper. / εκτυπωτής

processor [N-COUNT-U3] A processor carries out the instructions of computer programs. / επεξεργαστής

quality assurance [N-UNCOUNT-U1] Quality assurance is the act of checking products for problems. / διασφάλιση ποιότητας

query [N-COUNT-U11] A query is a search that locates all information of a specific type in a database. / αναζήτηση πληροφοριών

RAM [N-UNCOUNT-U3] RAM (Random Access Memory) is memory that can be quickly accessed. / Μνήμη Τυχαίας Προσπέλασης

resize [V-COUNT-U10] To resize is to make an image on a computer bigger or smaller. / αλλάζω το μέγεθος μιας σελίδας

resolution [N-UNCOUNT-U10] Resolution is the ability of a computer or camera to produce a clear and detailed image. / ανάλυση (η λεπτομέρεια και ακρίβεια της εμφάνισης εικόνων στον υπολογιστή)

router [N-COUNT-U5] A router is a device that allows more than one computer to connect to a network at the same time. / δρομολογητής, ρούτερ

scanner [N-COUNT-U4] A scanner is a device that is used for transferring printed documents and pictures into a computer system. / σαρωτής

search engine [N-COUNT-U9] A search engine is a computer program that allows people to search for particular information, products, etc. on the Internet. / μηχανή αναζήτησης

server [N-COUNT-U2] A server is a computer that connects many computers to hardware. / διακομιστής, σέρβερ

shopping cart [N-COUNT-U15] A shopping cart is a part of an online store that displays items that a consumer has selected for purchase, but has not yet paid for. / καρότσι αγορών

shortcut [N-COUNT-U6] A shortcut is an icon that has been moved to a desktop to make opening a file or program easier. / συντόμευση

3

Career Paths: Information Technology – Glossary

smartphone [N-COUNT-U2] A smartphone is a phone that you take with you to make calls and access the Internet anywhere. / κινητό τηλέφωνο τελευταίας τεχνολογίας

software [N-UNCOUNT-U1] Software is a program or instruction that makes a computer perform a specific task. / λογισμικό

sort [V-INT-U11] To sort is to arrange the information in a database in a specific way. / ταξινομώ πληροφορίες

spell check [N-UNCOUNT-U7] Spell check is a function that reviews a document for spelling errors. / ελεγκτής ορθογραφίας

spreadsheet [N-COUNT-U11] A spreadsheet is a computer program that organizes information and performs calculations. / λογιστικό φύλλο

SMTP [N-COUNT-U8] An SMTP (Simple Mail Transfer Protocol) is a method that allows computer users to send emails to other users. / πρωτόκολλο αποστολής ταχυδρομείου

supercomputer [N-COUNT-U2] A supercomputer is a large computer that is built to process large amounts of information at a higher speed than other computers can handle. / υπερυπολογιστής

table [N-COUNT-U11] A table is a single collection or arrangement of information in a database. / πίνακας δεδομένων

tablet [N-COUNT-U2] A tablet is a computer that is smaller than a laptop with a touch screen and used to browse the Internet and check email. / τάμπλετ

technical support [N-UNCOUNT-U1] Technical support is the task of helping people use and understand technology. / τεχνική υποστήριξη

template [N-COUNT-U7] A template is blank layout for certain types of documents. / πρότυπο, υπόδειγμα (για έγγραφα

tint [N-COUNT-U10] A tint is a small amount of a color in something. / ελαφρύς χρωματισμός, απόχρωση

touch screen [N-COUNT-U4] A touch screen is a monitor that lets users interact with the computer by touching the screen. / οθόνη αφής

traffic [N-UNCOUNT-U15] Traffic is the total number of users that go to and view a website in a certain amount of time. / κίνηση (το σύνολο των επισκεπτών ενός ιστότοπου σε δεδομένο χρόνο)

URL [N-COUNT-U9] A URL (Uniform Resource Locator) is the text and symbols that form a web address. / ηλεκτρονική διεύθυνση ιστοχώρου

usability [N-UNCOUNT-U12] Usability is how easy it is for a person to use a website. / δυνατότητα χρήσης, χρηστικότητα

USB [N-COUNT-U4] USB (Universal Serial Bus) is a commonly used type of connection or port to connect a peripheral to a computer. / Ενιαίος Σειριακός Δίαυλος

username [N-UNCOUNT-U8] A username is a name or code that identifies a person on a computer and allows that person to access his or her files. / όνομα χρήστη

video bridge [N-COUNT-U14] A video bridge is a device that allows you to hold multipoint videoconferences. It connects calls from several different locations. / συσκευή για πολυσημειακή τηλεδιάσκεψη

videoconference [N-COUNT-U14] A videoconference is a meeting or conversation between two or more people in different locations using computer technology. / τηλεδιάσκεψη

visibility [N-UNCOUNT-U12] Visibility is how easily people find a website using search engines, based on how many other websites link to it. / ορατότητα, προβολή (το πόσο εύκολα βρίσκεις μια σελίδα στο διαδίκτυο μέσω μηχανών αναζήτησης)

web browser [N-COUNT-U9] A web browser is a computer program that allows people to look at web pages on the Internet. / περιηγητής διαδικτύου

web design [N-UNCOUNT-U12] Web design is the act or practice of determining how a website looks. / σχεδίαση σελίδων διαδικτύου

web development [N-UNCOUNT-U12] Web development is the act or practice of determining how a website works. / δημιουργία ιστοσελίδας

web host [N-COUNT-U9] A web host is a company that provides the space for a web site on the Internet. / εταιρεία παροχής διαδικτυακού χώρου

website [N-COUNT-U9] A website is a collection of related pages on the Internet that contains information, pictures, etc. and is usually published by a person, group, or company. / διαδικτυακός τόπος, ιστοχώρος

webcam [N-COUNT-U14] A webcam is a small camera that connects to a computer. It broadcasts sound and video on the Internet. / διαδικτυακή κάμερα

webmail [N-UNCOUNT-U8] Webmail is an email service that people access through a web browser, and which sends and receives email but does not store it on computers. / διαδικτυακό ηλεκτρονικό ταχυδρομείο

window [N-COUNT-U6] A window is a rectangle on the desktop of a computer monitor that displays a file or program. Its contents are independent of the desktop screen. / παράθυρο εφαρμογής στην οθόνη του υπολογιστή

Wireless Local Area Network (WLAN) [N-COUNT-U5] A Wireless Local Area Network is a network that connects computers to a network without cables. / ασύρματο τοπικό δίκτυο

word processing program [N-COUNT-U7] People use word processing programs to write on computers. / πρόγραμμα επεξεργασίας κειμένου

worksheet [N-COUNT-U11] A worksheet is a single page of a spreadsheet. / φύλλο εργασίας

workstation [N-COUNT-U2] A workstation is a very fast computer that runs powerful work programs. / πολύ ισχυρός και γρήγορος υπολογιστής

www [N-UNCOUNT-U9] The www (World Wide Web) is the system of web pages, information, pictures, etc. that is available on the Internet. / Παγκόσμιος Ιστός

(Book 2)

4G network [N-COUNT-U7] A 4G network is a wireless network that sends and receives data very quickly. / δίκτυο κινητής τηλεφωνίας 4G

AAC [N-UNCOUNT-U6] AAC is a music file format that is of higher quality than MP3. / αρχείο αναπαραγωγής ήχου

account activity [N-UNCOUNT-U11] Account activity is a withdrawal, deposit or transfer in a bank account. / κίνηση τραπεζικού λογαριασμού

4

account alert [N-COUNT-U11] An account alert is a service that notifies bank customers of suspicious activity. / ειδοποίηση για ύποπτες συναλλαγές /

accuracy [N-COUNT-U10] Accuracy is how correct a GPS's measurement is. / ορθότητα, ακρίβεια μετρήσεων

acquisition time [N-UNCOUNT-U10] Acquisition time is how long a GPS takes to determine location. / χρόνος που απαιτείται για τον εντοπισμό τοποθεσίας στο GPS

active matrix display [N-COUNT-U14] An active matrix display is a type of screen that produces high quality, clear images. / είδος οθόνης πολύ υψηλής ποιότητας

actuator [N-COUNT-U13] An actuator is a piece of equipment that uses energy to make a robot move. / μηχανισμός κίνησης ενός ρομπότ

agent [N-COUNT-U15] An agent is a computer that observes and reacts to the conditions in a certain environment. / υπολογιστής που αλληλεπιδρά με το περιβάλλον του

algorithm [N-COUNT-U15] An algorithm is a rule or set of rules that provides steps to take or questions to ask in order to solve a problem. / αλγόριθμος (σειρά βημάτων για την επίλυση προβλήματος με υπολογιστή)

antivirus software [N-UNCOUNT-U3] Antivirus software is a program that locates and eliminates computer viruses. / λογισμικό προστασίας από ιούς

app [N-COUNT-U7] An app is an application with a specific function that you download onto your phone. / εφαρμογή (για κινητό τηλέφωνο ή ηλεκτρονικό υπολογιστή)

array [N-COUNT-U4] An array is a group of disk drives that are connected and used as a single unit. / σειρά από αλληλοσυνδεδεμένα συστήματα ανάγνωσης δισκέτας υπολογιστή

Artificial Intelligence [N-UNCOUNT-U15] Artificial Intelligence is the branch of science that seeks to create computers and robots that can reason, learn and solve problems independently. / τεχνητή νοημοσύνη

Assembler [N-UNCOUNT-U2] Assembler is a low level programming language that translates between computer programs. / συμβολομεταφραστής (πρόγραμμα υπολογιστή)

attachment [N-COUNT-U8] An attachment is a file sent as part of an email. / συνημμένο αρχείο (που αποστέλλεται με ηλεκτρονικό ταχυδρομείο)

automatic document feeder [N-COUNT-U5] An automatic document feeder (ADF) is a device that feeds multiple pages into a scanner. / αυτόματος τροφοδότης εγγράφων σε σαρωτή

autonomous [ADJ-U13] A robot that is autonomous can operate on its own without help from humans. / (για ρομπότ) αυτόνομο (που μπορεί να λειτουργήσει χωρίς ανθρώπινη βοήθεια)

avatar [N-COUNT-U9] An avatar is an image in a computer game that represents a person. / γραφική απεικόνιση χρήστη στον υπολογιστή

bank fraud [N-UNCOUNT-U11] Bank fraud is a crime in which someone uses bank funds without permission. / τραπεζική απάτη

barcode [N-COUNT-U8] A barcode is an arrangement of lines and spaces that represent data. / γραμμωτός κώδικας

BASIC [N-UNCOUNT-U2] BASIC is a high level programming language that was invented in the 1960s and is declining in popularity. / γλώσσα προγραμματισμού BASIC

bill pay [N-UNCOUNT-U11] Bill pay is a service provided by banks that allows customers to automatically pay bills online. / πληρωμή λογαριασμού μέσω διαδικτύου

bit [N-COUNT-U1] A bit is the smallest unit of computer data. / δυαδικό ψηφίο

bit size [N-COUNT-U1] A computer's bit size measures the number of bits that the CPU can access at once. / χωρητικότητα κεντρικής μονάδας υπολογιστή

bitmapped graphic [N-COUNT-U14] A bitmapped graphic is an image that is made up of many small points. / εικόνα που αποδίδεται με πολύ μικρά στίγματα

bitrate [N-COUNT-U6] Bitrate is a measurement of the amount of data that is processed. / το σύνολο των δεδομένων που επεξεργάζεται ο υπολογιστής

black and white [ADJ-COUNT-U14] An image or picture that appears only in black, white, and varying shades of gray is black and white. / ασπρόμαυρος

blog [N-COUNT-U9] A blog is a website where a person writes posts about his or her feelings, thoughts, activities, etc. / ιστολόγιο

Bluetooth [N-UNCOUNT-U7] Bluetooth is a wireless network that connects your phone with other devices, such as a computer. / συσκευή Bluetooth (για ασύρματη σύνδεση του κινητού με υπολογιστή κ.λπ.)

Boolean operator [N-COUNT-U12] A Boolean operator narrows a database search with words like "and," "or" and "not." / τελεστής του συστήματος Μπουλ

broadband [N-UNCOUNT-U3] Broadband is a system that allows computers to transfer large amounts of information. / ευρυζωνικότητα

bus speed [N-COUNT-U1] A computer's bus speed measures how many times the CPU can access a group of bits per second. This is measured in MHz. / ταχύτητα διαύλου

C [N-UNCOUNT-U2] C is a programming language that is used to program operating systems. / γλώσσα προγραμματισμού C

C# [N-UNCOUNT-U2] C# is a programming language that was invented as an alternative to Java. / γλώσσα προγραμματισμού C#

C++ [N-UNCOUNT-U2] C++ is a programming language that adds object-oriented programming capabilities to C. / γλώσσα προγραμματισμού C++

calibration [N-UNCOUNT-U5] Calibration is the act of adjusting printers and scanners to display colors correctly. / ρύθμιση εκτυπωτών και σκάνερ

call waiting [N-UNCOUNT-U7] Call waiting is a feature of some cell phones. It alerts you that someone is calling while you are on the line with someone else. / κλήση σε αναμονή

caller ID [N-UNCOUNT-U7] Caller ID is a feature of some cell phones that tells you the name and number of the person calling you. / αναγνώριση καλούντος

capacity [N-COUNT-U6] Capacity is the amount of space an MP3 player has to store files. / χωρητικότητα

cartography [N-UNCOUNT-U10] Cartography is the art of mapmaking. / χαρτογραφία, δημιουργία χαρτών

5

Career Paths: Information Technology – Glossary

case based reasoning [N-UNCOUNT-U15] Case based reasoning is the process of using information from previous experiences to solve new problems. / επίλυση θεμάτων χρησιμοποιώντας στοιχεία από προηγούμενες παρόμοιες περιπτώσεις

catalog [N-COUNT-U12] A catalog is an inventory of books in a library. / κατάλογος βιβλίων σε μια βιβλιοθήκη

CCD [N-COUNT-U5] CCD (Charge-Coupled Device) is a light-sensitive chip that is used when capturing digital images. / συσκευή συζευγμένου φορτίου

CD-R [N-COUNT-U4] A CD-R is a blank CD that can have information written on it only once. / CD μίας εγγραφής

CD-RW [N-COUNT-U4] A CD-RW is a blank CD that can have information written on it multiple times. / CD πολλαπλής εγγραφής

cell phone [N-COUNT-U7] A cell phone is a wireless phone that sends and receives data at a certain frequency of energy. / κινητό τηλέφωνο

cognitive scientist [N-COUNT-U15] A cognitive scientist is a person who studies the mind and thought processes. / γνωστικός επιστήμονας

compiler [N-COUNT-U2] A compiler changes human-readable source code into machine code that a CPU can understand. / πρόγραμμα υπολογιστή για μετατροπή δεδομένων σε γλώσσα αναγνωρίσιμη απ' το μηχάνημα

computer language [N-COUNT-U2] A computer language (also known as a programming language) is used by computer programmers to create instructions that a computer can understand. / γλώσσα πληροφορικής

computer vision [N-UNCOUNT-U15] Computer vision is the field and technology of making computers that have the ability to see. / μηχανική όραση για υπολογιστή

consciousness [N-UNCOUNT-U15] Consciousness is the state of being aware of oneself and one's actions. / συνείδηση, επίγνωση

coordinates [N-COUNT-U10] Coordinates are groups of numbers that describe location. / συντεταγμένες

CPU [N-UNCOUNT-U2] A CPU (Central Processing Unit) is the part of a computer that handles most of the processing of files and data. / κεντρική μονάδα επεξεργασίας του υπολογιστή

data compression [N-UNCOUNT-U4] Data compression is the process of storing information using less storage space by reducing the number of bits it takes up. / συμπίεση δεδομένων

data plan [N-COUNT-U8] A data plan is a contract from a cell phone service provider that states what online services are available on a cell phone and how much that transfer of data will cost. / πρόγραμμα πάροχου κινητής τηλεφωνίας

decode [V-T-U6] To decode a file is to return it to its original format. / αποκωδικοποιώ

digital [ADJ-U6] If a file is digital, it is stored electronically as a series of ones and zeros. / ψηφιακός

digital camera [N-COUNT-U5] A digital camera is a device that records images to be looked at on a computer. / ψηφιακή φωτογραφική μηχανή

digital zoom [N-COUNT-U5] Digital zoom is how a digital camera increases the display size of an image subject, reducing image quality. / ψηφιακή εστίαση

DIMM [N-COUNT-U1] A DIMM (Dual Inline Memory Module) is a newer type of memory module. It sends 64 bits of data to the CPU. / λειτουργική μονάδα μνήμης διπλής εισόδου

dock [N-COUNT-U6] A dock is a device that connects an MP3 player to a computer. / θέση σύνδεσης μουσικής συσκευής στον υπολογιστή

download [V-COUNT-U14] To download something is to transfer a file or program from the Internet to a personal computer or device. / κατεβάζω ένα αρχείο από το διαδίκτυο

DPI [N-COUNT-U5] DPI (Dots Per Inch) is the number of dots used per inch to create an image. / κουκκίδες ανά ίντσα εικόνας

drive power [N-UNCOUNT-U13] Drive power is the energy that makes a robot move. / κινητήρια ισχύς

driver [N-COUNT-6] A driver tells a device how it should communicate with a computer. / πρόγραμμα διαχείρισης περιφερειακής συσκευής

DSL [N-UNCOUNT-U3] DSL (Digital Subscriber Line) is a high-bandwidth connection using normal telephone lines. / ψηφιακή συνδρομητική γραμμή μέσω τηλεφωνικής σύνδεσης

dynamic model [N-COUNT-U13] A dynamic model is a mathematical model of the forces that allow a robot to move. / δυναμικό μοντέλο

e-book [N-COUNT-U12] An e-book is a book that is available online. / ηλεκτρονικό βιβλίο

e-journal [N-COUNT-U12] An e-journal is a scholarly publication that is published online. / ηλεκτρονική έκδοση ακαδημαϊκού περιοδικού

electronic funds transfer [N-COUNT-U11] An electronic funds transfer is the act of moving money from one account to another by using a computer. / ηλεκτρονική μεταφορά κεφαλαίων

electronic statement [N-COUNT-U11] An electronic statement is a summary of account activity that is viewable on a computer, but not on paper. / ηλεκτρονικό αντίγραφο κίνησης λογαριασμού τράπεζας

elevation [N-COUNT-U10] Elevation is the height of something above sea level. / υψόμετρο

email [N-COUNT-U8] An email is an electronic message sent from one user to another. / ηλεκτρονικό μήνυμα

enabling device [N-COUNT-U13] An enabling device is a device that a person activates to allow a robot to move. / συσκευή ενεργοποίησης ρομπότ

end-effector [N-COUNT-U13] An end-effector is the hand or tool at the end of a robot's manipulator. It is the part of the robot that moves or picks up objects. / το άκρο (το χέρι) ενός ρομπότ

EPC [N-COUNT-U8] An EPC (Electronic Product Code) is a number used to identify specific individual items. / ηλεκτρονικός κωδικός προϊόντος

equality constraint [N-COUNT-U13] An equality constraint is a value that specifies the end-effector's position and movements. / περιορισμός της ισότητας

ergonomic [ADJ-COUNT-U14] Something that is ergonomic has been designed to prevent injury from using it repeatedly. / εργονομικός

6

EZproxy [N-COUNT-U12] EZproxy is a library server program that allows remote users to access the library's electronic materials. / πρόγραμμα για απομακρυσμένη πρόσβαση σε ηλεκτρονική βιβλιοθήκη

failure [N-COUNT-U4] A failure occurs when a disk drive malfunctions and the data stored on it cannot be accessed. / βλάβη

feed [N-COUNT-U9] A feed is a format that lets you easily read updated news about something. / τροφοδότηση

flash memory [N-UNCOUNT-U5] Flash memory is a data storage medium that is used with digital cameras. / μνήμη φλας (για φωτογραφικές μηχανές)

forum [N-COUNT-U9] A forum is a website where people can discuss a certain topic. / δικτυακός τόπος για παράθεση απόψεων

freeze [V-I-U6] To freeze is to become unresponsive and stop functioning. / (για υπολογιστή) κολλάει

gaming [N-UNCOUNT-U9] Gaming is the activity of playing games online on a computer. / παιχνίδι σε υπολογιστή

gigabyte [N-COUNT-U6] A gigabyte is a unit of measurement of hard drive capacity. / γιγαμπάιτ (μονάδα μέτρησης της χωρητικότητας του σκληρού δίσκου ίση με 1 δισεκατομμύριο μπάιτ)

GPS [N-COUNT-U10] GPS (Global Positioning System) is a collection of 24 satellites that give accurate position and navigation data to people all over the Earth. / σύστημα εντοπισμού στίγματος

handle [N-COUNT-U9] A handle is a name that a person creates to access an account on a computer or website. / ψευδώνυμο

hard drive [N-COUNT-U1] A hard drive is a device in a computer that stores all of its information permanently. / σκληρός δίσκος

heuristics [N-UNCOUNT-U15] Heuristics is a type of algorithm designed to find a suitable solution to a problem when no perfect solution or answer is known. / μέθοδος ανεύρεσης λύσης

hotspot [N-UNCOUNT-U3] A hotspot is a location (like an airport or a cafe) that provides wireless Internet access to users. / σημείο με δωρεάν διαδίκτυο

identity theft [N-UNCOUNT-U11] Identity theft is the crime of using other people's personal information to take their money or buy items in their name. / πλαστοπροσωπία

index [N-COUNT-U12] An index is a categorical list of books in a library. / ευρετήριο περιεχομένων

inkjet printer [N-COUNT-U5] An inkjet printer is a device that uses ink to produce documents and images on paper. / ψεκαστικός εκτυπωτής

instant message [N-COUNT-U8] An instant message is a text-based conversation in real time. / άμεσο μήνυμα

integrity [N-UNCOUNT-U10] Integrity is a device's ability to perform consistently without error. / ακεραιότητα

ISP [N-COUNT-U3] An ISP (Internet Service Provider) is a company that provides Internet access. / Πάροχος Υπηρεσιών Διαδικτύου

Java [N-UNCOUNT-U2] Java is an object-oriented programming language. / γλώσσα προγραμματισμού Java

joint [N-COUNT-U13] Joints are the places where the parts of a robot connect. They allow the robot's parts to rotate. / σύνδεσμος, άρθρωση

laser printer [N-COUNT-U5] A laser printer is a device that produces documents and images on paper with a laser beam. / εκτυπωτής λέιζερ

latitude [N-COUNT-U10] Latitude is an object's location north or south of the Equator. / γεωγραφικό πλάτος

license restriction [N-COUNT-U12] A license restriction limits who can use a library's electronic resources. / περιορισμός άδειας χρήσης

link [N-COUNT-U9] A link is a word or set of words on a website or document. When you click on it, it takes you to a different website. / ζεύξη, σύνδεσμος

linker [N-COUNT-U2] A linker takes the machine code created by a compiler and makes it into an executable file. / πρόγραμμα σύνδεσης

lithium-ion battery [N-COUNT-U7] A lithium-ion battery is battery in cell phones that is small, light, and lasts a long time. / μπαταρία λιθίου

lockout [N-COUNT-U11] A lockout prevents people from accessing a bank account when the password is entered incorrectly too many times. / κλείδωμα ηλεκτρονικού τραπεζικού λογαριασμού

longitude [N-COUNT-U10] Longitude is an object's location east or west of the Prime Meridian. / γεωγραφικό μήκος

machine code [N-UNCOUNT-U2] Machine code is made up of the instructions that a CPU can process. / γλώσσα προγραμματισμού/κώδικας υπολογιστή

machine learning [N-UNCOUNT-U15] Machine learning is a field of study concerned with creating algorithms that computers can use to learn from their experiences. / μηχανική μάθηση

magnetic tape [N-UNCOUNT-U4] Magnetic tape is a long, narrow piece of magnetized plastic that is used for storing information. / μαγνητική ταινία

manipulator [N-COUNT-U13] The manipulator is the arm of a robot. The end-effector sits at the end of it. / βραχίονας ρομπότ

MB [N-COUNT-U1] A MB (megabyte) is a unit of measurement that measures how much information a computer stores. / μεγαμπάιτ (μονάδα μέτρησης χωρητικότητας του σκληρού δίσκου ίση με 1 εκατομμύριο μπάιτ)

media [N-PLURAL-U12] Media are the forms of mass communication available at the library, including images, films and periodicals. / μέσα επικοινωνίας, πολυμέσα

megapixel [N-COUNT-U5] A megapixel is a measurement of image size. / ένα εκατομμύριο εικονοστοιχεία (μέτρηση του μεγέθους και της ποιότητας μιας εικόνας)

memory storage density [ADJ-U4] Memory storage density is the amount of data that can be contained within a given computer storage device. / χωρητικότητα μνήμης

MHz [N-COUNT-U1] A MHz (megahertz) is a unit of measurement that measures the speed of a CPU. / μεγαχέρτζ (ένα εκατομμύριο χέρτζ/μονάδα μέτρησης της ταχύτητας του επεξεργαστή ενός υπολογιστή)

MMORPG [N-COUNT-U9] A MMORPG (Massively Multiplayer Online Role-Playing Game) is a type of online computer game in which many people interact with each other in a virtual world. / διαδικτυακό παιχνίδι για πολλαπλούς χρήστες

7

Career Paths: Information Technology – Glossary

model based reasoning [N-UNCOUNT-U15] Model based reasoning is the process of making conclusions by examining cause and effect relationships. / συλλογιστική βασισμένη σε μοντέλο

motherboard [N-COUNT-U1] A motherboard is the circuit board in a computer. It holds the CPU and all attachments. / μητρική κάρτα υπολογιστή

MP3 [N-UNCOUNT-U6] MP3 is the standard format for digital audio files. / μέθοδος ψηφιακής κωδικοποίησης ήχου

multi-thread [V-I-U2] To multi-thread is to use a computer to execute several threads of execution simultaneously. / εκτελώ ολοκληρωμένα και ανεξάρτητα κομμάτια ενός προγράμματος στον υπολογιστή ταυτόχρονα

navigation [N-UNCOUNT-U10] Navigation is the act of creating a route to a destination. / πλοήγηση

offline [ADJ-U14] If something is available offline, it can be used when an electronic device is not connected to the Internet. / εκτός σύνδεσης

online banking [N-UNCOUNT-U11] Online banking is a service that allows people to manage finances on the Internet. / τραπεζικές συναλλαγές μέσω διαδικτύου

optical zoom [N-COUNT-U5] Optical zoom is the use of the camera lens to make an image appear larger, retaining image quality. / μεγέθυνση εικόνας από κάμερα

paging file [N-COUNT-U1] A paging file is the area on the hard drive where the computer stores data that doesn't fit in the RAM. / αρχείο σελιδοποίησης

pattern recognition [N-UNCOUNT-U15] Pattern recognition is the process of classifying objects by examining their visual appearance. / αναγνώριση σχηματομορφών

PDF reader [N-COUNT-U14] A PDF (Portable Document Format) reader is a program that can open and display text or images. / πρόγραμμα προβολής αρχείου σε μορφή εγγράφου

pendant [N-COUNT-U13] A pendant is a device that a person uses to control and guide a robot's movements. / τηλεχειριστήριο ρομπότ

PIN [N-COUNT-U11] A PIN (Personal Identification Number) is a number assigned to bank account holders that helps banks identify the holder and maintain security. / προσωπικός αριθμός ταυτοποίησης

playlist [N-COUNT-U6] A playlist is a list of songs created by an MP3 player user. / λίστα αναπαραγωγής τραγουδιών

position [N-COUNT-U10] A position is an object's exact location. / τοποθεσία, θέση

post [N-COUNT-U9] A post is a message or news item on a website. / ανάρτηση μηνύματος

profile [N-COUNT-U9] A profile is a webpage on a social networking site with personal or identifying information. / προφίλ χρήστη μέσων κοινωνικής δικτύωσης

publication [N-COUNT-U14] A publication is book or magazine that a publishing company releases to the public. / έκδοση ενός οίκου (βιβλίο/περιοδικό)

RAID [N-UNCOUNT-U4] RAID (Redundant Array of Independent Disks) is a method for combining multiple disk drives into a single storage unit that can increase computer performance dramatically. / συνδυασμός πολλαπλών σκληρών δίσκων

RAM [N-UNCOUNT-U1] RAM (Random Access Memory) is a form of computer data storage. It is a physical device that holds data temporarily. / μνήμη υπολογιστή

reflow [N-COUNT-U14] Reflow is a process that allows images or text to fit screens that are different sizes. / προσαρμογή εικόνων/κειμένων σε διαφορετικές οθόνες

remote access [N-UNCOUNT-U12] Remote access is the ability to use online library resources from outside the library. / τηλεπρόσβαση

ringtone [N-COUNT-U7] A ringtone is a sound or song that a cell phone plays when someone calls it. / ήχος κουδουνίσματος

robot [N-COUNT-U15] A robot is a moving machine that can complete tasks automatically. / ρομπότ

robotics [N-UNCOUNT-U13] Robotics is the scientific study of robots and their structure and movement. / ρομποτική

SATA [N-UNCOUNT-U4] SATA (Serial Advanced Technology Attachment) is an interface for connecting storage devices to a computer system. / σύνδεση συσκευής αποθήκευσης πληροφοριών σε υπολογιστή

scan [V-T-U8] To scan a product is to use a laser to read bar codes and convert them to electronic signals. / σκανάρω, σαρώνω

serial robot [N-COUNT-U13] A serial robot is a robot that consists of a single series of joints linked together. / ρομπότ σε γραμμή παραγωγής

SIMM [N-COUNT-U1] A SIMM (Single Inline Memory Module) is an older type of memory module. It sends up to 32 bits of data to a CPU. / Μονάδα Μνήμης Μονής Σειράς

site key [N-COUNT-U11] A site key is a security system that lets the bank and the account holder verify their identities to one another in online transactions. / κλειδί ιστότοπου

site license [N-COUNT-U12] A site license allows users to access software regardless of their location. / άδεια χρήσης ιστότοπου

smartphone [N-COUNT-U8] A smartphone is a cellular phone that also functions like a PDA. / κινητό τηλέφωνο τελευταίας τεχνολογίας

social networking [N-UNCOUNT-U9] Social networking is the activity of socializing online with other people. This takes place on social networking sites, forums, blogs, etc. / κοινωνική δικτύωση

spam [N-UNCOUNT-U8] Spam is unwanted email, like advertisements, sent to large groups of people. Some email providers direct spam to special folders so that users do not have to see or open it. / ανεπιθύμητη ηλεκτρονική αλληλογραφία

SSL connection [N-COUNT-U11] An SSL (Secure Sockets Layer) connection is a connection between two servers that encrypts information so that no one else can monitor or access the information exchanged. / ασφαλής σύνδεση δύο κύριων υπολογιστών με κρυπτογράφηση των ανταλλασσόμενων δεδομένων

sub-pixel font rendering [N-UNCOUNT-U14] Sub-pixel font rendering is a process that increases the clarity of text on certain displays. / διαδικασία βελτίωσης της ευκρίνειας κειμένου στην οθόνη

subscription [N-COUNT-U12] A subscription is the agreement to use something, often requiring a fee. / συνδρομή

8

system requirements [N-COUNT-U14] System requirements are the hardware or software needed to run a program. / το απαραίτητο υλισμικό/λογισμικό

T-1 [N-UNCOUNT-U3] T-1 is a type of line used by businesses that connects many users at once to the Internet. / γραμμή σύνδεσης με το διαδίκτυο

T-3 [N-UNCOUNT-U3] T-3 is a powerful line made of 28 T-1 lines. / γραμμή σύνδεσης με το διαδίκτυο αποτελούμενη από 28 απλές γραμμές

tablet [N-COUNT-U8] A tablet is a computer that is smaller than a laptop with a touch screen and is used to browse the Internet and check email. / τάμπλετ

text [V-T-U8] To text someone is to send them a text message. / στέλνω μήνυμα σε κινητό τηλέφωνο

text message [N-COUNT-U7] A text message is a short, written message that a person sends to and from a cell phone. / μήνυμα σε κινητό τηλέφωνο

touchscreen [N-COUNT-U7] A touchscreen is a display on some cell phones that you tap to access its features and applications. / οθόνη αφής

transparency adapter [N-COUNT-U5] A transparency adapter is a device that is used with a scanner to capture see-through documents like slides. / εργαλείο για το σκανάρισμα διαφανειών

UPC [N-COUNT-U8] A UPC (Universal Product Code) is a 12-digit number used to identify consumer items. / Διεθνής Κωδικός Προϊόντος

upgrade [V-T-U3] To upgrade is to improve something, like a computer program or a type of service. / αναβαθμίζω

upload [V-T-U6-U14] To upload a file is to transfer it from a computer or device to the Internet or to another device, such as an MP3 player. / ανεβάζω» στο διαδίκτυο

USB flash drive [N-COUNT-U4] A USB flash drive is a portable flash memory system that uses a USB interface to connect to a computer and transfer information. / φλασάκι/στικάκι υπολογιστή

virtual memory [N-UNCOUNT-U1] Virtual memory is a method of computer data storage. The computer stores data on its hard drive instead of in the RAM. / εικονική μνήμη

virtual world [N-COUNT-U9] A virtual world is an online world where you can meet and interact with other people or computer players. / εικονικός κόσμος

voice activation [N-UNCOUNT-U7] Voice activation is a feature of some cell phones that lets you dial a number by voice instead of by hand. / φωνητική ενεργοποίηση

voicemail [N-UNCOUNT-U7] Voicemail is a feature that lets you listen to or leave an electronic spoken message on a cell phone. / φωνητικό ταχυδρομείο

VPN [N-COUNT-U12] A VPN (Virtual Private Network) is a way to encrypt a connection when you use remote access. / Εικονικό Ιδιωτικό Δίκτυο

waypoints [N-COUNT-U10] Waypoints are locations that you can mark or record in your GPS. / σημεία διαδρομής (π.χ. σε σύστημα πλοήγησης οχημάτων)

Wi-Fi® [N-UNCOUNT-U3] Wi-Fi® is a type of connection using wireless signals instead of a physical connection. / ασύρματη σύνδεση με το διαδίκτυο

wireless router [N-COUNT-U3] A wireless router is a device that forwards data as a wireless signal. / ασύρματος ρούτερ

(Book 3)

above the fold [ADJ-U4] If something on a website is above the fold, it is visible without scrolling down after the page has loaded. / (για τμήμα ιστοσελίδας) ορατό χωρίς κύλιση

ad product [N-COUNT-U4] An ad product is an advertising opportunity such as a banner that is located on a website. / διαφημιστική παρουσίαση προϊόντος σε μια ιστοσελίδα

ADM [N-COUNT-U12] An ADM (Automated Dispensing Machine) is a hospital machine that measures out specific amounts of medication into containers. / (σε νοσοκομείο) Αυτόματος Διανομέας Φαρμάκων

anchor [N-COUNT-U3] An anchor is a word, phrase, or image that includes a hyperlink and can be used for navigation. / λέξη/φράση σε κείμενο που σε συνδέει με ιστοσελίδα

animated GIF [N-COUNT-U4] An animated GIF is the combination of multiple GIF files in one advertisement to create animation. / διαφημιστικό σποτάκι με κινούμενα γραφικά

anti-antivirus virus [N-COUNT-U7] An anti-antivirus virus is a computer virus that attacks and often disables anti-virus software. / ιός που προσβάλλει το λογισμικό προστασίας από ιούς

anti-virus software [N-UNCOUNT-U10] Anti-virus software searches a computer system for computer viruses. / λογισμικό προστασίας από ιούς

Apple® [N-UNCOUNT-U1] Apple® is the company that produces Macs® and other computing products. / Apple® (εμπορική ονομασία εταιρείας παραγωγής υπολογιστών)

applet [N-COUNT-U3] An applet is a small application that is embedded in a webpage. / βοηθητική εφαρμογή σε μεγαλύτερο πρόγραμμα

attack [N-COUNT-U9] An attack is an attempt to get through computer security. / απόπειρα επίθεσης σε υπολογιστή

audit log [N-COUNT-U9] An audit log is a record of who has accessed a computer system and what actions they took. / αρχείο καταγραφής χρήσεων ενός υπολογιστή

authenticated [ADJ-U9] Authenticated is a program that has met the requirements of a system/organisation in order to be proven legitimate and safe to use / πιστοποιημένος, επικυρωμένος

automation [NOUN-UNCOUNT-U5] Automation is the use of programmed machines to perform tasks without human assistance. / αυτοματισμός

back end [ADJ-U15] If something is back end, it occurs at the end of a project or job. / τελική φάση ενός έργου

backdoor [N-COUNT-U9] A backdoor is a hidden way to get by security in computers and programs, sometimes intentionally created. / παράνομη πρόσβαση σε υπολογιστή

9

Career Paths: Information Technology – Glossary

backup [V-T-U10] To backup is to create a duplicate copy of data that is stored on a separate hard drive or computer system to prevent the loss of the data. / δημιουργώ αντίγραφο δεδομένων

bar coding [N-UNCOUNT-U12] Bar coding is a system in which doctors scan medicines and match them to patients. / χρήση γραμμωτού κώδικα (για τη χορήγηση φαρμάκων)

Basecamp® [N-UNCOUNT-U6] Basecamp® is a program offered by the company "37 signals" that organizes projects and can be accessed by multiple users simultaneously. / Basecamp® (εμπορική ονομασία προγράμματος διαχείρισης έργου)

block [V-T-U10] To block something is to prevent access to it. / μπλοκάρω, εμποδίζω

blog [N-U13] A blog is a personal website that is maintained by an individual. / ιστολόγιο

bug [N-COUNT-U9] A bug is a flaw in a computer program. / σφάλμα στο πρόγραμμα υπολογιστή

CAD [N-UNCOUNT-U3] CAD (Computer-Aided Design) is the use of a computer to design things such as machines or buildings. / CAD (χρήση υπολογιστή για σχεδιασμό)

campaign [N-COUNT-U4] A campaign is an agreement between an advertising company and a client that outlines which types of advertisements are to be used, where they are to be placed, and how long they will appear. / καμπάνια, διαφημιστική εκστρατεία

card scanning [N-UNCOUNT-U8] Card scanning is the practice of capturing the personal information stored on credit cards, debit cards, or passports. / σάρωση κάρτας (π.χ. πιστωτικής, χρεωστικής κ.λπ.)

CBT [N-UNCOUNT-U3] CBT (Computer-Based Training) is the use of a computer to train employees. / CBT (χρήση υπολογιστή για εκπαίδευση υπαλλήλου)

CDN [N-COUNT-U11] A CDN (Content Delivery Network) is a system of computers on a network containing copies of data that nearby users can access. / δίκτυο με διασυνδεδεμένους υπολογιστές

CDSS [N-UNCOUNT-U12] CDSS (Clinical Decision Support System) is a system that helps doctors diagnose problems. It also suggests treatment options. / CDSS (σύστημα που βοηθά στη διάγνωση)

centralize [V-T-U6] To centralize things is to bring from multiple places and make them available in one location. / συγκεντρώνω σ' ένα μέρος

click tracking [N-UNCOUNT-U4] Click tracking is the process of counting and keeping track of the number of clicks an advertisement receives. / καταγραφή των κλικ σε μια διαφήμιση

click-through rate [N-COUNT-U4] The click-through rate is the ratio of clicked advertisements to the number of advertisements that are viewed. / η αναλογία του αριθμού των κλικ που δέχεται μια διαφήμιση προς το σύνολο των επισκεπτών της σελίδας με τη διαφήμιση

cloud computing [N-UNCOUNT-U11] Cloud computing is use of the Internet for software and other resources. / χρήση των δυνατοτήτων του διαδικτύου για εξοικονόμηση αποθηκευτικού χώρου στον υπολογιστή μου

color matching [N-UNCOUNT-U1] Color matching is the ability to create colors as you see them on the screen. / δημιουργία χρωμάτων και αποχρώσεων

color-coding [N-UNCOUNT-U6] Color-coding is the practice of labeling things with different colors in order to tell them apart. / χρωματική κωδικοποίηση

command line [N-COUNT-U2] A command line is a word or phrase that makes a computer perform an operation. / εντολή σε υπολογιστή με τη μορφή λέξης/φράσης

commission [N-COUNT-U4] A commission is the amount of money charged by a website for hosting advertisements. / προμήθεια, μεσιτεία

component [N-COUNT-U15] A component is a part of something bigger. / συστατικό στοιχείο

Computer Aided Manufacturing [NOUN-UNCOUNT-U5] Computer Aided Manufacturing is the use of computers to control production equipment. / χρήση υπολογιστή για βιομηχανική παραγωγή

configure [V-T-U14] To configure something is to modify or arrange it so that it works in a certain way. / ρυθμίζω, διαμορφώνω

cover letter [N-COUNT-U14] A cover letter is a document that explains why a person is applying for a job and why that person believes he or she is qualified for that job. / επιστολή που συνοδεύει αίτηση για εργασία/βιογραφικό σημείωμα

CPC [N-UNCOUNT-U4] CPC (Cost Per Click-Through) is a pricing model wherein rates are charged according to how many clicks an advertisement receives. / κόστος ανά κλικ σε διαφήμιση

CPM [N-COUNT-U4] CPM (Cost Per 1,000 Impressions) is a pricing model wherein rates are charged according to how many thousands of people view the advertisement. / κόστος ανά χίλιους επισκέπτες μιας διαφήμισης

CPOE [N-UNCOUNT-U12] CPOE (Computerized Provider Order Entry) is a system that lets a doctor fill out electronic orders. / Σύστημα Ηλεκτρονικής Συνταγογράφησης (για τους γιατρούς)

customize [V-TRANS-U1] To customize something is to change it to meet your individual needs and purposes. / προσαρμόζω

cyber [ADJ-U8] If something is cyber, it is related to computers or the Internet. / που σχετίζεται με τον κυβερνοχώρο, διαδικτυακός

cyber criminal [N-COUNT-U10] A cyber criminal is a person who uses computers and the Internet to commit crimes such as identity theft and fraud. / εγκληματίας του κυβερνοχώρου

dashboard [N-COUNT-U6] A dashboard is a display on a computer that shows commonly or recently used files and programs. / πίνακας με πρόσφατα αρχεία

deployment [N-UNCOUNT-U11] Deployment is introducing new software into a group of hardware. / εισαγωγή και χρήση

detect [V-T-U10] To detect something is to discover it. / εντοπίζω, ανιχνεύω

duty [N-COUNT-U14] A duty is a task that someone is responsible for completing at a job. / καθήκον, υποχρέωση

DVD [N-COUNT-U3] A DVD (Digital Video Disc) is a storage disc that is read by a laser and can store media files such as videos and images. / ντι-βι-ντι, ψηφιακός βιντεοδίσκος

10

editor [N-COUNT-U15] An editor is a program that is used to create and change files. / πρόγραμμα υπολογιστή για επεξεργασία αρχείου

egress filter [N-COUNT-U13] An egress filter prevents harmful software from leaving a network. / πρόγραμμα υπολογιστή που εμποδίζει την έξοδο επιβλαβούς λογισμικού από ένα δίκτυο

EHR [N-COUNT-U12] An EHR (Electronic Health Record) is a computerized version of a patient's health record. / Ηλεκτρονικός Ιατρικός Φάκελος

elasticity [N-COUNT-U11] Elasticity is a computer system's ability to gain or lose computer resources as a user sees fit. / ευελιξία, προσαρμοστικότητα

electronic bulletin board [N-COUNT-U3] An electronic bulletin board is a shared file that can be used to spread information. / ηλεκτρονικός πίνακας ανακοινώσεων

embedded system [N-COUNT-U5] An embedded system is a combination of hardware and software designed to perform a specific task. / ενσωματωμένο σύστημα

EMM [N-UNCOUNT-U12] EMM (Electronic Materials Management) is a system that helps hospitals keep track of medications and medical supplies. / Σύστημα Ηλεκτρονικής Διαχείρισης Υλικού

encoder [NOUN-COUNT-U5] Encoders are devices that convert mechanical information into electronic signals. / κωδικοποιητής

Ethernet network [NOUN-COUNT-U5] An Ethernet network is a high-speed network that links computers together. / δικτύωση υπολογιστών υψηλής ταχύτητας

false negative [N-COUNT-U10] A false negative is when anti-virus software incorrectly indicates that an infected file is clean. / ψευδοαρνητική ένδειξη

false positive [N-COUNT-U10] A false positive is when anti-virus software incorrectly indicates that a clean file has been infected with a computer virus. / ψευδοθετική ένδειξη

FAQ [N-COUNT-U3] The FAQ (Frequently Asked Questions) section is a list of common questions with their answers. / Συχνές Ερωτήσεις

fault tolerant [NOUN-UNCOUNT-U5] Fault tolerant is the ability to continue functioning even though an error has occurred. / ανοχή συστήματος σε βλάβες

file archiving [N-UNCOUNT-U14] File archiving is the process of organizing computer files in an orderly way. This lets you retrieve them easily. / αρχειοθέτηση

firewall [N-COUNT-U9] A firewall is a program that restricts access on a network. / τείχος προστασίας αρχείων

Flash [N-UNCOUNT-U3] Flash is a media format that can be used to add videos, animations, and other media to a website. / το λογισμικό Φλας (για κινούμενα σχέδια, βιντεοπαιχνίδια κ.λπ.)

fraud [N-UNCOUNT-U8] Fraud is an action that results in the loss of another person's property. / απάτη

free software license [N-COUNT-U2] A free software license allows users to change and distribute programs. / άδεια δωρεάν χρήσης λογισμικού

frequency capping [N-UNCOUNT-U4] Frequency capping is the process of ensuring that a specific website visitor does not see the same advertisement an excessive number of times. / ανώτατο όριο συχνότητας προβολής μιας διαφήμισης στο διαδίκτυο

gallery [N-COUNT-U6] A gallery is a collection of icons or pictures that have been organized in a file or page. / σύνολο εικονιδίων ή φωτογραφιών

geo targeting [N-UNCOUNT-U4] Geo targeting is the process of showing advertisements in geographical areas where they are relevant. / γεωγραφική στόχευση

GUI [N-UNCOUNT-U15] A GUI (Graphical User Interface) is how a user interacts with a computer using images and text. / Γραφική Διεπαφή Χρήστη

hacker [N-COUNT-U7] A hacker is a person who exploits computer hardware and software for their own purposes. / χάκερ, ηλεκτρονικός πειρατής

hang [V-T-U4] To hang a website is to prevent it from loading all the way. / σταματώ το φόρτωμα μιας ιστοσελίδας

host [N-COUNT-U7] A host is a computer system that has a computer virus attached to it. / υπολογιστής προσβεβλημένος από ιό

HTML [N-UNCOUNT-U15] HTML (Hypertext Markup Language) is a way to alter the look of text on web pages. / Γλώσσα Σήμανσης Υπερκειμένου

IaaS [N-UNCOUNT-U11] IaaS (Infrastructure as a Service) delivers such elements as servers and software over the Internet. / Παροχή Υπηρεσιών Υποδομής

identity theft [N-UNCOUNT-U8] Identity theft is the process of stealing another person's personal information and using it for personal gain. / πλαστοπροσωπία

imbed [V-T-U7] To imbed is to make sth part of something else. / ενσωματώνω, εγκαθιστώ (κάτι μέσα σε κάτι άλλο)

implanted microchip [N-COUNT-U12] An implanted microchip is a tiny device in a person's body that releases specific amounts of medicine. / εμφυτευμένο μικροτσίπ

infect [V-T-U7] To infect a computer is to contaminate it with a computer virus. / μολύνω έναν υπολογιστή με ιό

ingress filter [N-COUNT-U13] An ingress filter prevents harmful software from entering a network. / πρόγραμμα υπολογιστή που εμποδίζει την είσοδο επιβλαβούς λογισμικού σ' ένα δίκτυο

install [V-T-U14] To install something is to add a new component or program to a computer or system. / εγκαθιστώ (πρόγραμμα σε υπολογιστή)

integrated circuit [N-COUNT-U5] An integrated circuit is a small chip that has several electronic devices attached to it. / ολοκληρωμένο κύκλωμα

interactive [ADJ-U15] If something is interactive, it will respond to a user's commands. / διαδραστικός

interface [N-COUNT-U2, U13] An interface provides a way for a user to interact with a computer or network. / διεπαφή, διασύνδεση, το περιβάλλον του υπολογιστή

interoperability [N-UNCOUNT-U12] Interoperability is the ability to easily send or combine electronic health data from one system into another. / διαλειτουργικότητα, ανταλλαγή δεδομένων μεταξύ λογισμικών

intruder [N-COUNT-U9] An intruder is a person or program that attempts to access a network or computer without permission. / παραβάτης, εισβολέας

11

Career Paths: Information Technology – Glossary

keylogger [N-COUNT-U9] A keylogger is type of trojan virus that tracks what keystrokes are entered into a computer. / ιός υπολογιστή που καταγράφει τις πληκτρολογήσεις μας

keyword [N-UNCOUNT-U13] A keyword is a term or phrase that is created to describe a webpage, so that it can be found in a search engine. / λέξη-κλειδί

lab-on-a-chip [N-COUNT-U12] A lab-on-a-chip is a tiny device that holds cells and fluid that a doctor can analyze easily. / τσιπάκι που πραγματοποιεί εργαστηριακές αναλύσεις

latency [NOUN-UNCOUNT-U5] Latency is the time between the end of one computer communication and the start of another. / χρόνος αναμονής

Linux® [N-UNCOUNT-U2] Linux® is a computer operating system. / λειτουργικό σύστημα Linux®

Linux® distribution [N-COUNT-U2] A Linux® distribution is a version of software for Linux®. / έκδοση Linux®

log in [V-I-U7] To log in is to provide a computer security system with the proper identification to use the computer. / συνδέομαι με έναν υπολογιστή

Mac® [N-COUNT-U1] A Mac® (Macintosh) is a type of computer from Apple®. / Mac® (είδος υπολογιστή απ' την εταιρεία Apple®)

malware [N-UNCOUNT-U8] Malware is any type of malicious, harmful software. / κακόβουλο λογισμικό

mask [V-COUNT-U13] To mask information is to block it from being viewed. / αποκρύπτω πληροφορία σε υπολογιστή

media player [N-COUNT-U3] A media player is used to play media such as videos and animations and can be embedded in a web page. / πρόγραμμα αναπαραγωγής πολυμέσων

message board [N-COUNT-U6] A message board is an online application that displays and organizes messages from users. / πίνακας μηνυμάτων

microrobotic tweezers [N-COUNT-U12] Microrobotic tweezers are very tiny tweezers that allow a doctor to operate in extremely small or delicate areas. / μικρορομποτικές λαβίδες

Microsoft Office® [N-UNCOUNT-U2] Microsoft Office® is a software package that offers word processing and spreadsheet programs. / Microsoft Office® (ολοκληρωμένο λογισμικό πακέτο της εταιρείας Microsoft®)

Microsoft® [N-UNCOUNT-U1] Microsoft® is the company that produces the Windows® operating system among other products. / η εταιρεία λογισμικών πακέτων Microsoft®

MPEG [N-UNCOUNT-U3] MPEG is a video format that is used to compress videos into smaller files. / αρχείο MPEG για τη συμπίεση των βίντεο

multimedia [N-UNCOUNT-U3] Multimedia is any type of media used on a webpage, including images, animations, and videos. / πολυμέσα

natural language [N-UNCOUNT-U13] Natural language is the use of phrases from normal speech in search engines. / φυσική γλώσσα

open source [ADJ-U2] If software is open source, it can be distributed with the same basic source code. / (για λογισμικό) ανοικτού κώδικα

open system [NOUN-COUNT-U5] An open system is a system that can use many different types of machines. / ανοικτό σύστημα

OpenOffice® [N-COUNT-U2] OpenOffice® is an open source software package similar to Microsoft Office®. / λογισμικό ανοικτού τύπου OpenOffice®

optic scanner [N-COUNT-U12] An optic scanner is a device that reads and records identification labels on medications. / οπτικός σαρωτής

OS X® [N-UNCOUNT-U1] OS X® is an operating system from Apple® for Mac® computers. / το πρόγραμμα OS X® της εταιρείας Apple® για τους υπολογιστές Mac®

oscilloscope [NOUN-COUNT-U5] An oscilloscope is a device that allows the user to view the electrical voltage of a machine. / παλμογράφος

overwriting virus [N-COUNT-U7] An overwriting virus is a computer virus that copies its code over and destroys the files of the original data. / ιός αντικατάστασης

PaaS [N-UNCOUNT-U11] PaaS (Platform as a Service) is a service where users receive a computing operating system and related components over the Internet. / Παροχή Υπηρεσιών Πλατφόρμας

PACS [N-UNCOUNT-U12] PACS (Picture Archiving and Communications System) is a system that captures and stores medical images from different sources. / Σύστημα Αρχειοθέτησης Ιατρικών Απεικονίσεων

patch [N-COUNT-U9] A patch is a piece of code that is used to fix a flaw in a computer program. / λογισμικό επιδιόρθωσης

pay-as-you-go [ADJ-U11] If software is pay-as-you-go, it is purchased as it is needed by the customer. / με πρόγραμμα πληρωμής ανάλογο με τη χρήση

PC [N-COUNT-U1] A PC (personal computer) refers to a computer that runs a Windows® operating system. / ηλεκτρονικός υπολογιστής, σταθερός υπολογιστής

PCI compliance [N-U13] PCI (Payment Card Industry) compliance is upholding certain security standards for accepting credit and other payment cards. / συμμόρφωση με τις προδιαγραφές ασφαλείας καρτών πληρωμής

performance tuning [N-UNCOUNT-U14] Performance tuning is the act of adjusting a network or system so that it works as efficiently as possible. / ρύθμιση για τη βέλτιστη απόδοση

pharming [N-UNCOUNT-U8] Pharming is a process wherein thieves reroute people to a fake website that appears to be legitimate in order to trick them into giving away their personal information. / κακόβουλη εκτροπή σε ψευδεπίγραφους ιστότοπους που ζητούν προσωπικές πληροφορίες

phishing [N-UNCOUNT-U8] Phishing is a process wherein thieves trick people into giving away their personal information through email. / απόπειρα υποκλοπής στοιχείων των χρηστών του διαδικτύου μέσα από μέιλ

PHP [N-UNCOUNT-U15] PHP is a scripting language that is used to create dynamic web pages. / γλώσσα δημιουργίας ιστοσελίδων με δυναμικό περιεχόμενο

piggyback [V-I-U7] To piggyback is to gain unauthorized access to a computer system by taking advantage of the owner's legitimate connection. / συνδέομαι παράνομα εκμεταλλευόμενος ανοιχτό υπολογιστή άλλου χρήστη

12

popup [N-COUNT-U9] A popup is an advertisement that suddenly appears in a new window in an Internet browser. / αναδυόμενο παράθυρο με διαφήμιση

prepress [N-COUNT-U1] Prepress is the process of preparing a document, magazine or book to be printed on a large scale. / προεκτύπωση

pretexting [N-UNCOUNT-U8] Pretexting is a process wherein thieves trick people into giving away their personal information over the phone. / εξαπάτηση ατόμου με τη δημιουργία ψεύτικου σεναρίου για την απόσπαση προσωπικών δεδομένων

priority inversion [NOUN-COUNT-U5] A priority inversion is a delay that occurs in a computer system when a low-priority task is dealt with before a high-priority task. / αντιστροφή προτεραιότητας

private cloud [N-COUNT-U11] A private cloud is a service offered to specific users who have purchased it and is not available publicly. / ιδιωτικό υπολογιστικό νέφος

processing speed [N-COUNT-U1] Processing speed is a measurement of how quickly a computer can perform tasks. / ταχύτητα επεξεργασίας

programmer [N-COUNT-U15] A programmer is someone who writes computer programs. / προγραμματιστής

protocol [N-COUNT-U9] Protocol is a set of rules that must be followed for the sake of security. / πρωτόκολλο

public cloud [N-COUNT-U11] A public cloud is a service offered for any users on the Internet. / δημόσιο υπολογιστικό νέφος

purge [V-T-U14] To purge is to delete files or data from a computer. / σβήνω αρχεία ή δεδομένα από έναν υπολογιστή

quarantine [V-T-U10] To quarantine something is to place it in complete isolation where it cannot access or infect anything else. / κατάσταση αδρανοποίησης, καραντίνα

real time [ADJ-U6] If information is updated or shown in real time, it is updated or shown at the same time as new information is received. / πραγματικός χρόνος

redesign [V-COUNT-U13] To redesign a website is to change, add, or delete certain elements, but keep others. / επανασχεδιάζω (π.χ. μια ιστοσελίδα)

redundancy [NOUN-UNCOUNT-U5] Redundancy is the inclusion of duplicate components in a system to maintain production when one component fails. / πλεονασμός, εφεδρεία μέσων

reliability [N-UNCOUNT-U3] Reliability is the probability that something will function properly and without any failures. / αξιοπιστία

replicate [V-T-U7] To replicate is to make copies. / αναπαράγω, αντιγράφω

resident extension [N-COUNT-U7] A resident extension is an add-on to a computer virus that causes it to become part of the host computer's operating system. / επέκταση εγκατεστημένου ιού στον υπολογιστή

resident virus [N-COUNT-U7] A resident virus is a computer virus that becomes part of a file or disk drive but does nothing until activated by a trigger event. / ιός εγκατεστημένος στον υπολογιστή

résumé [N-COUNT-U14] A résumé is a document that shows a person's education, work history and qualifications and is used when applying for jobs. / βιογραφικό σημείωμα

root directory [N-COUNT-U13] The root directory is the main directory of a file system and is where all other branches of the system come from. / κεντρικός κατάλογος αρχείων

rootkit [N-COUNT-U10] A rootkit is a type of computer virus that is created to gain total control over a computer system by overwriting parts of its operating system. / κακόβουλο λογισμικό που προκαλεί την απώλεια ελέγχου του συστήματος

SaaS [N-UNCOUNT-U11] SaaS (Software as a Service) is a service where users receive applications over the Internet instead of buying and installing them. / Παροχή Υπηρεσιών Λογισμικού

Samba® [N-UNCOUNT-U2] Samba® is a Linux® program that allows Linux® to act as a client on a Windows®-based network. / Samba® (πρόγραμμα της Linux® που επιτρέπει την επικοινωνία με υπολογιστές Windows®)

scalability [N-COUNT-U11] Scalability is a system's ability to change size as needed in a given situation. / επεκτασιμότητα του συστήματος

scanner [N-COUNT-U8] A scanner is a device used to capture the personal information stored on credit cards, debit cards, and passports. / σαρωτής

script [N-COUNT-U15] A script is a group of commands to be carried out automatically. / δέσμη εντολών

security [N-UNCOUNT-U9] Security is a the state of being safe from attack. / ασφάλεια του υπολογιστή

security software [N-UNCOUNT-U10] Security software is software that keeps a computer safe from threats such as computer viruses and cyber crimes. / λογισμικό ασφαλείας

Skype™ [N-UNCOUNT-U6] Skype™ is software than enables people to call one another using computers rather than telephones. / πρόγραμμα Skype™ (για τηλεφωνικές κλήσεις)

spyware [N-UNCOUNT-U8] Spyware is a type of computer program that gathers someone's personal information without their knowledge. / κατασκοπευτικό λογισμικό

sweep [V-T-U10] To sweep a computer system is to search it for computer viruses. / αναζητώ και απομακρύνω ιούς

system administrator [N-COUNT-U14] A system administrator is a person whose job is to manage and maintain a computer system. / διαχειριστής συστήματος

TCP/IP protocol [N-COUNT-U2] A TCP/IP protocol is a set of rules that determine how a computer connects to a network or the Internet. / Πρωτόκολλο Ελέγχου Μεταφοράς Δεδομένων

technical [ADJ-U14] Something that is technical involves information from the areas of science and industry. / τεχνικός, της τεχνολογίας

telecommute [V-I-U6] To telecommute is to work at a location away from a main office by using technology. / εργάζομαι απ' το σπίτι μέσω υπολογιστή

terminal [N-COUNT-U2] A terminal is a computer that allows users to input command lines. / τερματικό υπολογιστή

toggle [V-I-U6] To toggle is to move from one file or setting to another. / μετακινούμαι απ' τον ένα φάκελο στον άλλον

13

Career Paths: Information Technology – Glossary

tour [N-COUNT-U6] A tour is a series of web pages that offer information about a product or site. / σύνολο ιστοσελίδων που παρέχουν πληροφορίες για ένα προϊόν ή ιστότοπο

Trojan horse [N-COUNT-U8] A Trojan horse is a computer program that appears to be beneficial but is actually malicious. / «δούρειος ίππος» (πρόγραμμα που κρύβει ιό)

troubleshooting [N-UNCOUNT-U14] Troubleshooting refers to the process of identifying and fixing technical problems. / ανίχνευση και αποκατάσταση βλαβών

trust logo [N-COUNT-U13] A trust logo is a seal that appears on a web page and means that the security of information on that page is assured by an accredited company. / σήμανση ασφαλούς πλοήγησης στο διαδίκτυο

typography [N-COUNT-U1] Typography is a computer's use of typefaces. / η μορφή των χαρακτήρων ενός υπολογιστή

Ubuntu® [N-UNCOUNT-U10] Ubuntu® is an operating system based on Linux®. / λειτουργικό σύστημα Ubuntu®

Unix® [N-UNCOUNT-U14] Unix® is a specific type of computer operating system. Servers often use this operating system. / λειτουργικό σύστημα Unix®

user-friendly [ADJ-U15] If something is user-friendly, it is easy to access and use. / φιλικός προς το χρήστη

utility computing [N-UNCOUNT-U11] Utility computing is a way of selling computer use as a metered service like water and electricity. / παροχή χρήσης υπολογιστή με χρέωση σαν της ηλεκτροδότησης και υδροδότησης

vendor [N-COUNT-U2] A vendor is someone who distributes programs and utilities. / προμηθευτής, πάροχος

video subsystem [N-COUNT-U1] The video subsystem is the part of the computer that presents the visuals on the screen. / σύστημα σε υπολογιστή για προβολή εικόνων

virus [N-COUNT-U7] A virus is a harmful computer program file that takes up residence in a computer without the owner's knowledge or permission. / ιός υπολογιστή

virus removal software [N-UNCOUNT-U10] Virus removal software destroys computer viruses, removing them from the files they have infected. / λογισμικό απομάκρυνσης ιών

Visual Basic [N-UNCOUNT-U15] Visual Basic is a simple programming language with a graphical component. / Visual Basic γλώσσα προγραμματισμού (για γραφικά)

web developer [N-COUNT-U15] A web developer is someone who builds a website. / σχεδιαστής ιστοσελίδων

web page analysis [N-UNCOUNT-U10] Web page analysis is a process wherein the security of a website is determined in order to help computer users know whether or not the website is safe. / ανάλυση ιστοσελίδας (για την εξασφάλιση ασφαλούς επίσκεψης)

web portal [N-COUNT-U13] A web portal is a webpage that displays information gathered from several different places. / διαδικτυακή πύλη

web-based [AD-U6] If something is web-based, it is available on the Internet instead of on a disk. / που βρίσκεται στο διαδίκτυο

Windows® [N-UNCOUNT-U1] Windows® is the operating system created by Microsoft® that is used on many PCs. / λειτουργικό σύστημα Windows®

worm [N-COUNT-U8] A worm is a type of malicious software that replicates itself through emails. / λογισμικό σκουλήκι (κακόβουλο λογισμικό που αναπαράγεται)

XML [N-COUNT-U15] XML (Extensive Markup Language) is a programming language that is used to encode web pages. / γλώσσα XML (για κωδικοποίηση ιστοσελίδων)

14

Audio Files

All audio files accompanying the resources proposed for application for teaching foreign language for the occupation:

- COMPUTER TECHNICAL SERVICES AND OPERTION TECHNICIAN (HARDWARE AND NETWORKING)
- SOFTWARE AND WEB OPERATIONS

are freely available at the Resource centres equipped under the *Curriculum Development in Vocational Education and Training Schools* Project*.*

Delivery of Foreign Language in Occupation: Packages of Learning materials, Computer technical services / Software and web operations

188