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# Curriculum Development in Vocational Education and Training Schools

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## Annex 16

**Delivery of Foreign Language in Occupation  
Packages of the Learning Materials for:**

- 1. Cooling, Heating and Climatization**
- 2. Plumbing and Heating**

**Grade: 9, 10, 11**

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## Exit level of the whole period of Foreign Language education 9<sup>th</sup> – 12<sup>th</sup> grade

<p>Target group and position</p>	<p>Students in vocational schools trained to acquire qualifications “Cooling, Heating and Climatization” and “Plumbing and Heating” in 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> 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.</p>
<p>Entry level and Exit level</p>	<p>Listening A1 – A2+</p> <p>Reading A1 - A2+</p> <p>Spoken interaction A1 - A2+</p> <p>Spoken production A1- A2</p> <p>Writing A1 - A2</p> <p>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.</p>

## Entry and Exit Level

According to the European Framework of reference

	A1	A2	B1	B2	C1	C2
<b>Listening</b>						
<b>Reading</b>						
<b>Spoken Interaction</b>						
<b>Spoken Production</b>						
<b>Writing</b>						

	<b>Entry level</b>
	<b>Exit level</b>

## Description of language skills Exit level

Level of language skills	General language skills	Professional language skills
<p>Understanding</p> <p>Listening A2 /B1</p>	<p>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 geography, employment).</p> <p>Can catch the main point in short, clear, simple messages and announcements.</p>	<ul style="list-style-type: none"> <li>➤ Can follow everyday conversations if speech is carefully articulated though words and expressions may need to be repeated.</li> <li>➤ Can understand information about everyday events if speech is clear and pronunciation – standard.</li> <li>➤ Can understand the main points in a well-structured, factual presentation in my area of work or interest.</li> <li>➤ 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.</li> <li>➤ Can understand the main aspects of longer talks/meetings referring to routine work-related matters when standard language is used.</li> </ul>
<p>Reading A2 / B1</p>	<p>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.</p> <p>Can understand texts that consist mainly of high frequency everyday or job- related language.</p>	<ul style="list-style-type: none"> <li>➤ Can understand short, simple texts composed of the most common words and expressions including international words.</li> <li>➤ Can understand short, simple job-related texts and letters/orders.</li> <li>➤ Can understand standard routine correspondence (letters, faxes, e-mails), e.g. concerning simple arrangements</li> <li>➤ Can identify familiar and predictable information in advertisements, leaflets and timetables.</li> <li>➤ Can understand simple operating instructions, e.g. in lifts, on public telephones, cash machines, etc.</li> <li>➤ Can scan simple written materials such as brochures and short newspaper articles and extract factual information I need</li> <li>➤ Can read and extract the necessary information related to my work tasks.</li> </ul>

<p>Spoken interaction A2/ B1</p>	<p>Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities.</p> <p>Can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.</p>	<ul style="list-style-type: none"> <li>➤ Can handle most situations likely to arise in business and on travelling to a country where the language is spoken.</li> <li>➤ Can handle a conversation as long as it concerns routine activities within a familiar and/or predictable context.</li> <li>➤ Can hold a spontaneous conversation on familiar topics of personal and professional interest.</li> <li>➤ Can give or seek personal views and opinions on familiar topics in an informal discussion with friends/colleagues, agreeing and disagreeing politely.</li> </ul>
<p>Spoken production A2</p>	<p>Can connect phrases in a simple way in order to 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.</p>	<ul style="list-style-type: none"> <li>➤ Can give comparatively detailed accounts of experiences, events, work processes etc.</li> <li>➤ Can give routine information about own area of work/department/company/product.</li> <li>➤ Can give a brief summary of a story, e.g. the plot of a book or film and make comments on it.</li> <li>➤ Can give reasons for my plans, opinions, decisions and actions.</li> </ul>
<p>Writing A2</p>	<p>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.</p>	<ul style="list-style-type: none"> <li>➤ Can write short letters, fax messages, e-mail messages, memos following a sample</li> <li>➤ Can write SMSs using standard abbreviations.</li> <li>➤ Can take notes related to matters of immediate interest in work</li> <li>➤ Can fill in forms or questionnaires briefly describing personal and job-related information.</li> <li>➤ Can produce short messages, faxes or e-mails with simple variations on memorised language.</li> <li>➤ Can give directions how to get to a meeting, place or company in a written form.</li> <li>➤ Can give short accounts of past or present events and activities, or of future plans.</li> <li>➤ Can briefly describe something or somebody.</li> </ul>

## GRADE 9

### Description of module content and learning objectives

<p>Module objectives</p> <p>9<sup>th</sup> grade</p> <p>Module 1</p> <p>Focus on vocabulary</p> <p>Use of terminology in the foreign language</p>	<p>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.</p> <p>Students learn and practice <b>how to</b>:</p> <p>General linguistic range</p> <ul style="list-style-type: none"> <li>• use isolated words/signs and basic expressions in order to give simple information about themselves.</li> <li>• use a very basic range of simple expressions about personal details and needs of a concrete type.</li> <li>• use some basic structures in one-clause sentences with some omission or reduction of elements.</li> </ul> <p>Vocabulary range</p> <ul style="list-style-type: none"> <li>• effectively apply and make use of a basic vocabulary repertoire of words/signs and phrases related to particular concrete situations.</li> </ul> <p>Grammatical accuracy</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>
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<p>Module 2</p> <p>Professional communication in the foreign language</p>	<p>Vocabulary control</p> <ul style="list-style-type: none"> <li>• control a narrow repertoire dealing with concrete, everyday needs.</li> <li>• 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.</li> <li>• reproduce correctly a limited range of sounds as well as stress for simple, familiar words and phrases.</li> <li>• reproduce sounds in the target language if carefully guided.</li> <li>• 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).</li> </ul> <ul style="list-style-type: none"> <li>• 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.</li> </ul> <p>Students learn and practice <b>how to</b> Interact with colleagues or customers generally and more specifically for the level <b>how to</b>:</p> <p>Verbally</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• adapt well-rehearsed, memorised, simple phrases to particular circumstances through limited lexical substitution and difficulties in articulating less familiar words is usual.</li> <li>• communicate basic information about personal details and needs of a concrete type in a simple way.</li> <li>• communicate very basic information about personal details in a simple way, while pausing is expected and usual to search for expressions</li> <li>• manage very short, isolated, rehearsed utterances using gesture and signalled requests for help when necessary.</li> </ul>
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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
<b>Listening A1</b>	<p>can recognise familiar terminology for the occupation and very basic phrases concerning immediate concrete surroundings when people speak/sign slowly and clearly.</p> <p>Can understand phrases and the highest frequency vocabulary related to areas of most immediate professional relevance (e.g. very basic information, shopping, local area, employment, prices, etc.).</p>	<ul style="list-style-type: none"> <li>➤ Can understand figures, prices and times given slowly and clearly in an announcement by other people in work environment or in a shop.</li> <li>➤ Can recognise relevant terminology, words and numbers that they already know in simple, short recordings, provided these are delivered very slowly and clearly</li> <li>➤ Can understand instructions addressed carefully and slowly to them and follow short, simple directions (adding, subtracting, multiplying, dividing)</li> <li>➤ Can understand in outline very simple information being explained in a predictable situation like a guided tour or process of calculation, provided the delivery is very slow and clear and that there are long pauses from time to time.</li> <li>➤ can understand phrases and expressions related to the most immediate priority in the work environment provided speech is clearly and slowly articulated</li> <li>➤ Can understand simple technical information, such as operating instructions for everyday equipment</li> <li>➤ Can extract the essential information from short, recorded passages dealing with predictable everyday work matters</li> <li>➤</li> </ul>	<p><b>From Electrician, Express Publishing</b></p> <p>Book 1 Exercise 5, 6 and 7 from Unit 1 General Tools, p. 4-5            Book 1 Exercise 5, 6 and 7 from Unit 2 More Tools, p. 6-7            Book 1 Exercise 5, 6 and 7 from Unit 4 Specialized Tools, p. 10-11            Book 1 Exercise 5, 6 and 7 from Unit 5 Materials, p. 12-13            Book 1 Exercise 5, 6 and 7 from Unit 6 Safety, p. 14-15            Book 1 Exercise 5, 6 and 7 from Unit 7 Actions, p. 16-17            Book 1 Exercise 5, 6 and 7 from Unit 8 More Actions, p. 18-19            Book 1 Exercise 5, 6 and 7 from Unit 10 Measurements, p. 22-23            Book 1 Exercise 5, 6 and 7 from Unit 11 Elements of Electricity, p. 24-25</p> <p>Book 2 Exercise 5, 6 and 7 from Unit 6 Fuses and Circuit Breakers, p. 14-15</p> <p><b>From Electronics, Express Publishing, 2022</b></p> <p>Book 1 Exercise 5, 6 and 7 from Unit 2 Electricity Basics, p. 6-7            Book 1 Exercise 5, 6 and 7 from Unit 3 Electricity Basics, p. 8-9            Book 1 Exercise 5, 6 and 7 from Unit 6 Soldering tools, p. 14-15            Book 1 Exercise 5, 6 and 7 from Unit 12 Electrical Safety, p. 26-27            Book 1 Exercise 5, 6 and 7 from Unit 14 Measurements, p. 30-31            Book 1 Exercise 5, 6 and 7 from Unit 15 Prefixes, 32-33</p> <p>Book 3 Exercise 5, 6 and 7 from Unit 1 Diagrams, p. 4-5</p>

<p><b>Reading A1 towards A1+</b></p>	<p>can understand familiar names, words/ signs and very simple sentences, for example on notices and posters or in catalogues.</p> <p>can find specific, predictable information in simple everyday material, such as advertisements, prospectuses, menus and timetables, and I can understand</p>	<ul style="list-style-type: none"> <li>➤ Can understand from a letter, card or e-mail the event to which they are being invited and the information given about day, time and location.</li> <li>➤ Can recognise times and places in very simple notes and text messages from friends or colleagues (e.g. “Back at 4 o’clock” or “In the meeting room”), provided there are no abbreviations.</li> <li>➤ Can understand short, simple messages sent via social media or e-mail (e.g. proposing what to do, when and where to meet).</li> <li>➤ Can understand simple everyday signs such as “Parking”, “Station”, “Dining room”, “No smoking”, etc.</li> <li>➤ Can understand very short, simple, instructions used in familiar everyday contexts (e.g. “No parking”, “No food or drink”), especially if there are illustrations.</li> <li>➤ Can find information about places, times and prices on posters, flyers and notices.</li> <li>➤ Can find and understand simple, important information in advertisements, programmes for special events, leaflets and brochures (e.g. what is proposed, costs, the date and place of the event, departure times).</li> <li>➤ Can understand store guides (information on which floors departments are on) and directions (e.g. where to find lifts).</li> <li>➤ Can understand basic work information (e.g. times when work starts, breaks are scheduled, meals are served).</li> </ul>	<p><b>From Electrician, Express Publishing</b></p> <p>Book 1 Exercise 2, 3 and 4 from Unit 1 General Tools, p. 4-5          Book 1 Exercise 2, 3 and 4 from Unit 2 More Tools, p. 6-7          Book 1 Exercise 2, 3 and 4 from Unit 4 Specialized Tools, p. 10-11          Book 1 Exercise 2, 3 and 4 from Unit 5 Materials, p. 12-13          Book 1 Exercise 2, 3 and 4 from Unit 6 Safety, p. 14-15          Book 1 Exercise 2, 3 and 4 from Unit 7 Actions, p. 16-17          Book 1 Exercise 2, 3 and 4 from Unit 8 More Actions, p. 18-19          Book 1 Exercise 2, 3 and 4 from Unit 10 Measurements, p. 22-23          Book 1 Exercise 2, 3 and 4 from Unit 11 Elements of Electricity, p. 24-25</p> <p>Book 2 Exercise 2, 3 and 4 from Unit 6 Fuses and Circuit Breakers, p. 14-15</p> <p><b>From Electronics, Express Publishing, 2022</b></p> <p>Book 1 Exercise 2, 3 and 4 from Unit 2 Electricity Basics, p. 6-7          Book 1 Exercise 2, 3 and 4 from Unit 3 Electricity Basics, p. 8-9          Book 1 Exercise 2, 3 and 4 from Unit 6 Soldering tools, p. 14-15          Book 1 Exercise 2, 3 and 4 from Unit 12 Electrical Safety, p. 26-27          Book 1 Exercise 2, 3 and 4 from Unit 14 Measurements, p. 30-31          Book 1 Exercise 2, 3 and 4 from Unit 15 Prefixes, 32-33</p> <p>Book 3 Exercise 2, 3 and 4 from Unit 1 Diagrams, p. 4-5</p>
<p><b>Spoken interaction A1 towards A1+</b></p>	<p>can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate and</p>	<ul style="list-style-type: none"> <li>➤ Can understand and use basic, formulaic expressions such as “Yes”, “No”, “Excuse me”, “Please”, “Thank you”, “No thank you”, “Sorry”.</li> <li>➤ Can recognise simple greetings.</li> <li>➤ Can greet people, state their name and take leave in a simple way.</li> </ul>	<p><b>From Electrician, Express Publishing</b></p> <p>Book 1 Exercise 1, 7 and 8 from Unit 1 General Tools, p. 4-5          Book 1 Exercise 1, 7 and 8 from Unit 2 More Tools, p. 6-7          Book 1 Exercise 1, 7 and 8 from Unit 4 Specialized Tools, p. 10-11          Book 1 Exercise 1, 7 and 8 from Unit 5 Materials, p. 12-13          Book 1 Exercise 1, 7 and 8 from Unit 6 Safety, p. 14-15</p>

	<p>help me formulate what I am trying to express.</p>	<ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ Can make an introduction and use basic greeting and leave-taking expressions.</li> <li>➤ Can ask how people are and react to news.</li> <li>➤ Can ask people for things and give people things.</li> <li>➤ Can handle numbers, quantities, cost and time.</li> </ul>	<p>Book 1 Exercise 1, 7 and 8 from Unit 7 Actions, p. 16-17            Book 1 Exercise 1, 7 and 8 from Unit 8 More Actions, p. 18-19            Book 1 Exercise 1, 7 and 8 from Unit 10 Measurements, p. 22-23            Book 1 Exercise 1, 7 and 8 from Unit 11 Elements of Electricity, p. 24-25</p> <p>Book 2 Exercise 1, 7 and 8 from Unit 6 Fuses and Circuit Breakers, p. 14-15</p> <p><b>From Electronics, Express Publishing, 2022</b>            Book 1 Exercise 1, 7 and 8 from Unit 2 Electricity Basics, p. 6-7            Book 1 Exercise 1, 7 and 8 from Unit 3 Electricity Basics, p. 8-9            Book 1 Exercise 1, 7 and 8 from Unit 6 Soldering tools, p. 14-15            Book 1 Exercise 1, 7 and 8 from Unit 12 Electrical Safety, p. 26-27            Book 1 Exercise 1, 7 and 8 from Unit 14 Measurements, p. 30-31            Book 1 Exercise 1, 7 and 8 from Unit 15 Prefixes, 32-33</p> <p>Book 3 Exercise 1, 7 and 8 from Unit 1 Diagrams, p. 4-5</p>
<p><b>Oral production A1</b></p>	<p>can use simple phrases and sentences to describe where I live and people I know.</p>	<ul style="list-style-type: none"> <li>➤ Can produce short phrases about themselves, giving basic personal information (e.g. name, address, family, nationality).</li> <li>➤ Can produce simple, mainly isolated phrases about people and places.</li> <li>➤ Can describe themselves (e.g. name, age, family), using simple words/signs and formulaic expressions, provided they can prepare in advance.</li> <li>➤ Can express how they are feeling using simple adjectives like “happy” or “tired”, accompanied by body language.</li> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>▪ The language user produces an oral text which is received by an audience of one or more listeners.</li> <li>▪ Examples: reading a written text aloud, speaking from notes or visual aids (diagram, pictures, charts, etc.)</li> <li>▪ Acting out a rehearsed role</li> </ul> <p>See above exercises for speaking interaction:</p> <ul style="list-style-type: none"> <li>▪ Distribute role cards – students read their role cards</li> </ul> <p>Write a diagram of the role play words/sentences on the board</p>

<p><b>Written production A1</b></p>	<p>can produce simple isolated phrases and sentences.</p>	<ul style="list-style-type: none"> <li>➤ Can give basic personal information (e.g. name, address, nationality), perhaps with the use of a dictionary.</li> <li>➤ Can use simple words/signs and phrases to describe certain everyday objects (e.g. the colour of a car, whether it is big or small).</li> </ul>	<p><b>From Electrician, Express Publishing</b></p> <p>Book 1 Exercise 9 from Unit 1 General Tools, p. 4-5            Book 1 Exercise 9 from Unit 2 More Tools, p. 6-7            Book 1 Exercise 9 from Unit 4 Specialized Tools, p. 10-11            Book 1 Exercise 9 from Unit 5 Materials, p. 12-13            Book 1 Exercise 9 from Unit 6 Safety, p. 14-15            Book 1 Exercise 9 from Unit 7 Actions, p. 16-17            Book 1 Exercise 9 from Unit 8 More Actions, p. 18-19            Book 1 Exercise 9 from Unit 10 Measurements, p. 22-23            Book 1 Exercise 9 from Unit 11 Elements of Electricity, p. 24-25</p> <p>Book 2 Exercise 9 from Unit 6 Fuses and Circuit Breakers, p. 14-15</p> <p><b>From Electronics, Express Publishing, 2022</b></p> <p>Book 1 Exercise 9 from Unit 2 Electricity Basics, p. 6-7            Book 1 Exercise 9 from Unit 3 Electricity Basics, p. 8-9            Book 1 Exercise 9 from Unit 6 Soldering tools, p. 14-15            Book 1 Exercise 9 from Unit 12 Electrical Safety, p. 26-27            Book 1 Exercise 9 from Unit 14 Measurements, p. 30-31            Book 1 Exercise 9 from Unit 15 Prefixes, 32-33</p> <p>Book 3 Exercise 9 from Unit 1 Diagrams, p. 4-5</p>
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Teaching/learning contents (guide lines) – Cooling, Heating and Climatization 9<sup>th</sup> grade, Plumbing and Heating 9<sup>th</sup> grade  
2 teaching hours per week

<b>Topics from the Curriculum Package</b>	<b>Resources</b>	<b>Comments Teaching and learning focus and methods Linguistic aspects/teaching and learning methods</b>
BASIC ELECTRICITY	<p><b>From Electrician, Express Publishing</b> Book 1 Unit 1 General Tools, p. 4-5 Book 1 Unit 2 More Tools, p. 6-7 Book 1 Unit 11 Elements of Electricity, p. 24-25</p> <p><b>From Electronics, Express Publishing, 2022</b> Book 1 Unit 2 Electricity Basics, p. 6-7 Book 1 Unit 3 Electricity Basics, p. 8-9 Book 1 Unit 6 Soldering tools, p. 14-15</p> <p><b>From Electrical&amp; Electronics- Vocational English Courses</b> Grade 11 Unit 3 pages 12, 13, 14 Grade 11 Unit 4 pages 20, 21</p>	
MATERIALS KNOWLEDGE	<p><b>From Electrician, Express Publishing, 2022</b> Book 1 Unit 5 Materials, p. 12-13</p>	
COMPUTER AIDED DRAWING	<p><b>From Electrician, Express Publishing, 2022</b> Book 1 Unit 10 Measurements, p. 22-23</p> <p><b>From Electronics, Express Publishing, 2022</b> Book 1 Unit 15 Prefixes, p. 32-33 Book 3 Unit 1 Diagrams, p. 4-5</p>	

<p><b>INSTALLATION</b></p>	<p><b>From Electrician, Express Publishing, 2022</b>            Book 1 Unit 4 Specialized Tools, p. 10-11            Book 1 Unit 6 Safety, p. 14-15            Book 1 Unit 7 Actions, p. 16-17            Book 1 Unit 8 More Actions, p. 18-19</p> <p>Book 2 Unit 6 Fuses and Circuit Breakers, p. 14-15</p> <p><b>From Electronics, Express Publishing, 2022</b>            Book 1 Unit 14 Measurements, p. 30-31            Book 1 Unit 12 Electrical Safety, p. 26-27            Book 1 Unit 15 Prefixes, 32-33</p>	
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**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



## 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 of 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 – 9<sup>th</sup> grade

*From Electrician, Express Publishing, 2022*

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
<b>Book 1</b>					
	1	General Tools	Reading a page from the company manual. (reading for specific information)	tool kit, side cutters, long nose (needle nose) pliers, diagonal cutters, end cutting pliers, wire strippers, screwdriver, flashlight, untidily knife, measuring tape	
	2	More Tools	Reading a web forum. (filling gaps)	allen wrench, torque wrench, tool belt, electrical tape, duct tape, hammer, nut driver, crimper, socket wrench, hacksaw, Phillips screwdriver	
	4	Specialized Tools	Reading a web-page of a company (completing a table)	conduit bender, fish tape, multimeter, plug-in analyser, stepped drill bit, level, labeling machine, lineman’s pliers, hammer drill, stud punch, masonry drill bit	
	5	Materials	Reading a trade magazine article (completing a table)	block, brick, cement, concrete, copper, drywall, mortar, plaster, plywood, rotary drill, rotary hammer, steel, stone, wood	

	6	Safety	Reading a safety poster (true/false statements)	Safety glasses, steel toe boots, leather gloves, rubber mat, arc shield, hard hat, hot stick, arc flash blanket, arc flash clothing, electric shock	
	7	Actions	Reading an occupational manual of an Electrician (true/false statements)	lift, stand, climb, stoop, kneel, turn on, turn off, split, grab, release	
	8	More Actions	Reading instructions for fixing underground wires (multiple choice questions)	push, pull, connect, install, bind, test, twist, strip, splice, inspect	
	10	Measurements	Reading a magazine article about measurements (true/false statements)	imperial, metric, round off, inch, centimeter, foot, yard, millimeter, meter, degree, Celsius, Fahrenheit, convert, caliper, micrometer	
	11	Elements of Electricity	Reading a course catalog about electricity class (true/false statements)	voltage, current, resistance, electron, AC, DC, volt, ampere, ohm, watt	
<b>Book 2</b>					
	6	Fuses and Circuits Breakers	Reading a manufacturer's guide on fuses and circuit breakers (completing a table)	fuse, circuit breaker, overload, ground fault, cartridge fuse, plug fuse, trip, single pole breaker, double pole breaker, blown fuse, replacement	

From Electronics, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
<b>Book 1</b>					
	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	
	6	Soldering tools	Reading instructions on using a soldering iron (reading for specific information)	bond, component, desoldering iron, flux, melt, remove, solder, solder sucker, solder wick, soldering iron, tip, vacuum pump	
	12	Electrical Safety	Reading a poster on safety (reading for specific information)	bare, circuit ground, contact, discharge, energized, exposed, jewelry, live connection point, non-conductive, retain, shock, terminal, turn off	
	14	Measurements	Reading an article (multiple choice questions)	angular frequency, centimeter, decibel, inch, micron, milibar, millimeter, phase angle, time constant, watt-hour	

	15	Prefixes	Reading a chart (multiple choice questions)	giga (G), kilo (k), mega (M), micro ( $\mu$ ), milli (m), nano (n), pico (p), prefix, symbol, terra (T), value	
<b>Book 3</b>					
	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	



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)

*From Electrician, Express Publishing, 2022*

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
<b>Book 1</b>							
	1	General tools	Reading a page from a company manual (true/false statements)	Listening to a conversation between two electricians (listening for a specific information); Completing a conversation	Acting out a dialogue between a new electrician and an experienced electrician	Filling out a new electrician's notes about tools	
	2	More tools	Reading a web forum (multiple choice questions)	Listening to a conversation between two electricians (true/false statements);	Acting out a dialogue between two electricians	Filling out an electrician's shopping list for what he needs to get for his tool kit	

				Completing a conversation			
	4	Specialized Tools	Reading a web-page of a company (completing a table)	Listening to a conversation between an employee and a customer (true/false statements)	Acting out a conversation between an employee and a customer	Filling out an order form	
	5	Materials	Reading a trade magazine article (completing a table)	Listening to a conversation between an experienced and a new electrician (true/false statements)	Acting out a conversation between an experienced and a new electrician	Filling out electrician's notes	
	6	Safety	Reading a safety poster (true/false statements)	Listening to a conversation between an experienced and a new electrician (true/false statements)	Acting out a conversation between an experienced and a new electrician	Filling out the electrician's notes about what to use to drill through the floor	
	7	Actions	Reading an occupational manual of an Electrician (true/false statements)	Listening to a conversation between an intern and an electrician (true/false statements)	Acting out a conversation between an intern and an electrician	Filling out interview notes	
	8	More Actions	Reading instructions for fixing underground	Listening to a conversation between two electricians	Acting out a conversation between two electricians	Filling out notes about directions	

			wires (multiple choice questions)	(true/false statements)			
	10	Measurements	Reading a magazine article (true/false statements)	Listening to a conversation between two electricians (multiple choice questions); Completing a conversation	Acting out a dialogue between two electricians	Filling out a work order	
	11	Elements of electricity	Reading a college course catalog describing an electricity class (true/false statements)	Listening to a class about electricity (true/false statements); Completing a conversation	Acting out a dialogue between a teacher and a student	Completing a quiz	
<b>Book 2</b>							
	6	Fuses and circuit breakers	Reading a manufacturer's guide on fuses and circuit breakers (reading for specific information)	Listening to a conversation between a company representative and a customer (true/false statements); Completing a conversation	Acting out a dialogue between a company representative and a customer	Filling out a representative's call record	Fuses and circuit breakers

From Electronics, Express Publishing, 2022

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
<b>Book 1</b>							
	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	

	6	Soldering tools	Reading instructions on using a soldering iron (reading for specific information)	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 tutor's assignment	
	12	Electrical Safety	Reading a poster on safety (reading for specific information)	Listening to a conversation between technician and his apprentice (multiple choice questions);  Completing a conversation	Acting out a dialogue between a technician and his apprentice	Filling out an electrical safety poster	
	14	Measurements	Reading an article (multiple choice questions)	Listening to a conversation between two technicians (true/false statements);  Completing a conversation	Acting out a dialogue between an apprentice technician and experienced technician	Filling out a work report	
	15	Prefixes	Reading a chart (multiple choice questions)	Listening to a conversation between two electronics technicians (true/false statements);	Acting out a dialogue between an experienced technician and a new technician	Filling out a new technician's email	

				Completing a conversation			
<b>Book 3</b>							
	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	

## GRADE 10

### Description of module content and learning objectives

<p>Module objectives</p> <p>10<sup>th</sup> grade</p> <p>Module 1</p> <p>Focus on vocabulary</p> <p>Use of terminology in the foreign language</p>	<p>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.</p> <p>Students learn and practice <b>how to</b>:</p> <p>General linguistic range</p> <ul style="list-style-type: none"> <li>• Use some simple structures correctly but still systematically makes basic mistakes</li> <li>• 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</li> <li>• Clearly pronounce familiar words although repetition is needed from time to time</li> <li>• produce sounds in the target language if carefully guided. It may affect intelligibility, requiring collaboration from interlocutors.</li> <li>• Use effectively and close to independently a repertoire of basic language which enables them to deal with everyday situations with predictable</li> <li>• Convey very basic content, though they will generally have to compromise the message and search for words/signs.</li> </ul> <p>Vocabulary range</p> <ul style="list-style-type: none"> <li>• effectively apply and make use of a basic vocabulary repertoire of words/signs and phrases related to particular concrete situations.</li> <li>• Use sufficient vocabulary for the expression of basic communicative needs.</li> <li>• Use sufficient vocabulary for coping with simple survival needs.</li> </ul>
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<p>Module 2</p> <p>Professional communication in the foreign language</p>	<p>Grammatical accuracy</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Use some simple structures correctly, but still systematically makes basic mistakes; nevertheless, it is usually clear what they are trying to say.</li> </ul> <p>Vocabulary control</p> <ul style="list-style-type: none"> <li>• control a narrow repertoire dealing with concrete, everyday needs and in professional context</li> <li>• Clearly pronounce enough to be understood, but conversational partners will need to ask for repetition from time to time.</li> <li>• 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.</li> <li>• Demonstrate an intelligible pronunciation when communicating in simple everyday situations, provided the interlocutor makes an effort to understand specific sounds.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>Students learn and practice <b>how to</b> Interact with colleagues or customers generally and more specifically for the level <b>how to</b>:</p> <p>Verbally</p> <ul style="list-style-type: none"> <li>• Can make and respond to invitations, suggestions, apologies, etc. using learnt phrases and memorized exchanges</li> <li>• Can handle very short social exchanges, using everyday polite forms of greeting and address</li> <li>• Can expand learnt phrases through simple recombination of their elements</li> <li>• Can ask for attention</li> <li>• adapt well-rehearsed, memorised, simple phrases to particular circumstances through limited lexical substitution and difficulties in articulating less familiar words is usual.</li> </ul>
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- 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
<p><b>Understanding Listening A1+</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>➤ can understands phrases and expressions related to the most immediate priority in the work environment provided speech is clearly and slowly articulated</li> <li>➤ can identify the topic of discussion</li> <li>➤ can follow speech which is very slow and carefully articulated</li> <li>➤ can understand instructions addressed carefully and slowly</li> <li>➤ Can catch the main point in short, clear, simple message and announcements</li> <li>➤ Can understands simple technical information, such as operating instructions for everyday equipment</li> <li>➤ Can extracts the essential information from short, recorded passages dealing with predictable everyday work matters</li> <li>➤ 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.</li> <li>➤ 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.</li> <li>➤ 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").</li> <li>➤ Can understand simple directions on how to get from X to Y, by foot or public transport.</li> <li>➤ Can understand basic instructions on times, dates and numbers, etc., and on routine tasks and assignments to be carried out.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b>            Book 1 Exercises 5, 6 and 7 from Unit 6 Safety, p. 14-15            Book 1 Exercises 5, 6 and 7 from Unit 12 Electrical Safety, p. 26-27            Book 1 Exercises 5, 6 and 7 from Unit 13 Types of Wires, p. 28-29            Book 1 Exercises 5, 6 and 7 from Unit 14 Wire Codes, p. 30-31</p> <p>Book 2 Exercises 5, 6 and 7 from Unit 1 Electrical Connectors, p. 4-5            Book 2 Exercises 5, 6 and 7 from Unit 2 Conduit Systems, p. 6-7            Book 2 Exercises 5, 6 and 7 from Unit 12 Grounding Systems, p. 26-27</p> <p><b>From Electronics, Express Publishing, 2022</b>            Book 1 Exercises 5, 6 and 7 from Unit 13 Math, p. 28-29</p> <p>Book 3 Exercises 5, 6 and 7 from Unit 1 Diagrams, p. 4-5</p> <p><b>From Plumbing, Express Publishing, 2022</b>            Book 1 Exercises 5, 6 and 7 from Unit 1 Hand Tools 1, p. 4-5            Book 1 Exercises 5, 6 and 7 from Unit 2 Hand Tools 2, p. 6-7            Book 1 Exercises 5, 6 and 7 from Unit 5 Basic Actions 1, p. 12-13            Book 1 Exercises 5, 6 and 7 from Unit 6 Basic actions 2, p. 14-15            Book 1 Exercises 5, 6 and 7 from Unit 11 Pipes, Tubes and Piping, p. 24-25</p> <p>Book 2 Exercises 5, 6 and 7 from Unit 11 Blueprints: Reading, p. 24-25</p>

		<ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ 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.</li> </ul>	<p>Book 2 Exercises 5, 6 and 7 from Unit 12 Blueprints: Drafting, p. 26-27</p>
<p><b>Reading A1 towards A1+</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>➤ can read and extract the necessary information related to working environment and the occupation.</li> <li>➤ can extract the important information and main points from short specialised texts, manuals, orders, instructions, etc.</li> <li>➤ can get a general understanding of an occupation-specific text.</li> <li>➤ Can understand very simple formal e-mails and letters (e.g. confirmation of a booking or online purchase).</li> <li>➤ Can understand everyday signs and notices, etc. in public places, such as streets, restaurants, railway stations; in workplaces, such as directions, instructions, hazard warnings.</li> <li>➤ Can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus, reference lists and timetables.</li> <li>➤ Can locate specific information in lists and isolate the information required (e.g. use catalogues to find a service or tradesman).</li> <li>➤ Can understand texts describing people, places, everyday life and work environment, etc., provided they use simple language.</li> <li>➤ Can understand information given in illustrated brochures and maps (e.g. the principal attractions of a city).</li> <li>➤ 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.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b></p> <p>Book 1 Exercises 2, 3 and 4 from Unit 6 Safety, p. 14-15          Book 1 Exercises 2, 3 and 4 from Unit 12 Electrical Safety, p. 26-27          Book 1 Exercises 2, 3 and 4 from Unit 13 Types of Wires, p. 28-29          Book 1 Exercises 2, 3 and 4 from Unit 14 Wire Codes, p. 30-31</p> <p>Book 2 Exercises 2, 3 and 4 from Unit 1 Electrical Connectors, p. 4-5          Book 2 Exercises 2, 3 and 4 from Unit 2 Conduit Systems, p. 6-7          Book 2 Exercises 2, 3 and 4 from Unit 12 Grounding Systems, p. 26-27</p> <p><b>From Electronics, Express Publishing, 2022</b></p> <p>Book 1 Exercises 2, 3 and 4 from Unit 13 Math, p. 28-29</p> <p>Book 3 Exercises 2, 3 and 4 from Unit 1 Diagrams, p. 4-5</p> <p><b>From Plumbing, Express Publishing, 2022</b></p> <p>Book 1 Exercises 2, 3 and 4 from Unit 1 Hand Tools 1, p. 4-5          Book 1 Exercises 2, 3 and 4 from Unit 2 Hand Tools 2, p. 6-7          Book 1 Exercises 2, 3 and 4 from Unit 5 Basic Actions 1, p. 12-13          Book 1 Exercises 2, 3 and 4 from Unit 6 Basic actions 2, p. 14-15          Book 1 Exercises 2, 3 and 4 from Unit 11 Pipes, Tubes and Piping, p. 24-25</p>

		<ul style="list-style-type: none"> <li>➤ Can understand simple, brief instructions, provided they are illustrated and not presented in continuous text.</li> </ul>	<p>Book 2 Exercises 2, 3 and 4 from Unit 11 Blueprints: Reading, p. 24-25</p> <p>Book 2 Exercises 2, 3 and 4 from Unit 12 Blueprints: Drafting, p. 26-27</p>
Spoken interaction <b>A1+</b>	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.	<ul style="list-style-type: none"> <li>➤ can exchange information on a variety of simple and routine matters directly related to the immediate work environment.</li> <li>➤ can ask questions, confirm information and avoid misunderstanding</li> <li>➤ can handle a simple conversation in order to obtain goods and services</li> <li>➤ can handle simple social exchanges with customers/colleagues, e.g. introductions, invitations, apologies.</li> <li>➤ can ask and answer simple questions about someone's preferences, requests, purchases and orders.</li> <li>➤ Can interact in a simple way but communication is totally dependent on repetition at a slower rate, rephrasing and repair.</li> <li>➤ Can ask and answer simple questions, initiate and respond to simple statements in areas of immediate need or on very familiar topics.</li> <li>➤ Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions.</li> <li>➤ 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.</li> <li>➤ 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.</li> <li>➤ Can take part in a simple conversation of a basic factual nature on a predictable topic (e.g. their home country, job, school).</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b></p> <p>Book 1 Exercises 1, 7 and 8 from Unit 6 Safety, p. 14-15</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 12 Electrical Safety, p. 26-27</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 13 Types of Wires, p. 28-29</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 14 Wire Codes, p. 30-31</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 1 Electrical Connectors, p. 4-5</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 2 Conduit Systems, p. 6-7</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 12 Grounding Systems, p. 26-27</p> <p><b>From Electronics, Express Publishing, 2022</b></p> <p>Book 1 Exercises 1, 7 and 8 from Unit 13 Math, p. 28-29</p> <p>Book 3 Exercises 1, 7 and 8 from Unit 1 Diagrams, p. 4-5</p> <p><b>From Plumbing, Express Publishing, 2022</b></p> <p>Book 1 Exercises 1, 7 and 8 from Unit 1 Hand Tools 1, p. 4-5</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 2 Hand Tools 2, p. 6-7</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 5 Basic Actions 1, p. 12-13</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 6 Basic actions 2, p. 14-15</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 11 Pipes, Tubes and Piping, p. 24-25</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 11 Blueprints: Reading, p. 24-25</p>

		<ul style="list-style-type: none"> <li>➤ Can ask for and provide everyday goods and services.</li> <li>➤ Can give and receive information about quantities, numbers, prices, etc.</li> <li>➤ Can make simple purchases by stating what is wanted and asking the price.</li> <li>➤ Can understand questions and instructions addressed carefully and slowly to them and follow short, simple directions.</li> <li>➤ Can ask and answer simple questions, initiate and respond to simple statements in areas of immediate need or on very familiar topics.</li> <li>➤ can ask and answer questions about my own area of work using simple language.</li> <li>➤ can ask for and give directions referring to a map or plan.</li> <li>➤ can discuss in a very simple way events, activities and plans.</li> <li>➤ can take simple telephone calls or put callers through.</li> <li>➤ can make arrangements concerning meeting points/date/time/arrival and departure, when simple language is used.</li> </ul>	<p>Book 2 Exercises 1, 7 and 8 from Unit 12 Blueprints: Drafting, p. 26-27</p>
<p><b>Oral production A1+</b></p>	<p>can use simple phrases and sentences to describe where I live and people I know.</p>  <p>Can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my</p>	<ul style="list-style-type: none"> <li>➤ can describe myself and my environment, using simple language.</li> <li>➤ can give a simple account of my work place, my job or company.</li> <li>➤ can produce simple mainly isolated phrases about people and places related to my occupation.</li> <li>➤ can read a very short, rehearsed statement – e.g. to introduce a person, propose a product.</li> <li>➤ 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.</li> <li>➤ Can describe themselves, what they do and where they live.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The language user produces an oral text which is received by an audience of one or more listeners.</li> <li>▪ Examples: reading a written text aloud, speaking from notes or visual aids (diagram, pictures, charts, etc.)</li> <li>▪ Acting out a rehearsed role</li> </ul> <p>See above exercises for speaking interaction:</p> <ul style="list-style-type: none"> <li>▪ Distribute role cards – students read their role cards</li> </ul> <p>Write a diagram of the role play words/sentences on the board</p>

	<p>educational background and my present or most recent job.</p>	<ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ 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.</li> <li>➤ Can use a very short prepared text to deliver a rehearsed statement (e.g. to formally introduce someone, to propose a toast).</li> </ul>	
<p><b>Written production A1</b></p>	<p>Can produce simple isolated phrases and sentences.</p> <p style="text-align: center;"></p> <p>Can produce a series of simple phrases and sentences linked with simple connectors like “and”, “but” and “because”.</p>	<ul style="list-style-type: none"> <li>➤ can write short letters, messages, e-mail messages, memos following a sample</li> <li>➤ can write SMSs using standard abbreviations.</li> <li>➤ can take notes related to matters of immediate interest in work</li> <li>➤ can fill in forms with personal details (job, age, address, etc.</li> <li>➤ can write simple isolated phrases and sentences, which I have memorized or copied.</li> <li>➤ 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.</li> <li>➤ Can give information about matters of personal relevance (e.g. likes and dislikes, family, pets) using simple words/signs and basic expressions.</li> <li>➤ Can produce simple isolated phrases and sentences.</li> <li>➤ Can describe in very simple language what a room (or a familiar object) looks like.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b></p> <p>Book 1 Exercise 9 from Unit 6 Safety, p. 14-15            Book 1 Exercise 9 from Unit 12 Electrical Safety, p. 26-27            Book 1 Exercise 9 from Unit 13 Types of Wires, p. 28-29            Book 1 Exercise 9 from Unit 14 Wire Codes, p. 30-31</p> <p>Book 2 Exercise 9 from Unit 1 Electrical Connectors, p. 4-5            Book 2 Exercise 9 from Unit 2 Conduit Systems, p. 6-7            Book 2 Exercise 9 from Unit 12 Grounding Systems, p. 26-27</p> <p><b>From Electronics, Express Publishing, 2022</b></p> <p>Book 1 Exercise 9 from Unit 13 Math, p. 28-29</p> <p>Book 3 Exercise 9 from Unit 1 Diagrams, p. 4-5</p> <p><b>From Plumbing, Express Publishing, 2022</b></p> <p>Book 1 Exercise 9 from Unit 1 Hand Tools 1, p. 4-5            Book 1 Exercise 9 from Unit 2 Hand Tools 2, p. 6-7            Book 1 Exercise 9 from Unit 5 Basic Actions 1, p. 12-13            Book 1 Exercise 9 from Unit 6 Basic actions 2, p. 14-15            Book 1 Exercise 9 from Unit 11 Pipes, Tubes and Piping, p. 24-25</p> <p>Book 2 Exercise 9 from Unit 11 Blueprints: Reading, p. 24-25            Book 2 Exercise 9 from Unit 12 Blueprints: Drafting, p. 26-27</p>

Teaching/learning contents (guide lines) – Cooling, Heating and Climatization 10<sup>th</sup> grade  
2 teaching hours per week

<b>Topics from the Curriculum Package</b>	<b>Resources</b>	<b>Comments Teaching and learning focus and methods Linguistic aspects/teaching and learning methods</b>
BASIC ELECTRICITY	<p><b>From Electrician, Express Publishing, 2022</b></p> <p>Book 1 Unit 13 Types of Wires, p. 28-29 Book 1 Unit 14 Wire Codes, p. 30-31 Book 1 Unit 6 Safety, p. 14-15 Book 1 Unit 12 Electrical Safety, p. 26-27</p> <p>Book 2 Unit 1 Electrical Connectors, p. 4-5 Book 2 Unit 2 Conduit Systems, p. 6-7 Book 2 Unit 12 Grounding Systems, p. 26-27</p>	
BASIC REFRIGERATION AND AIR CONDITIONING	<p><b>Additional materials:</b></p> <p>Basic refrigeration and air conditioning: <a href="https://byjus.com/physics/difference-between-air-conditioning-and-refrigeration/">https://byjus.com/physics/difference-between-air-conditioning-and-refrigeration/</a></p> <p>Basic air-conditioning terms: <a href="https://www.hasslerheating.com/blog/air-conditioning-terms-everyone-should-know">https://www.hasslerheating.com/blog/air-conditioning-terms-everyone-should-know</a></p> <p>Types and problems of air- conditioners: <a href="https://youtu.be/w13gxpmf8dU">https://youtu.be/w13gxpmf8dU</a></p>	

<p><b>COMPUTER AIDED DRAWING</b></p>	<p><b>From Electronics, Express Publishing, 2022</b> Book 3 Unit 1 Diagrams, p. 4-5 Book 1 Unit 13 Math, p. 28-29</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 2 Unit 11 Blueprints: Reading, p. 24-25 Book 2 Unit 12 Blueprints: Drafting, p. 26-27</p>	
<p><b>INSTALLATION PLUMBING</b></p>	<p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 5 Basic Actions 1, p. 12-13 Book 1 Unit 6 Basic actions 2, p. 14-15 Book 1 Unit 11 Pipes, Tubes and Piping, p. 24-25</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 1 Hand Tools 1, p. 4-5 Book 1 Unit 2 Hand Tools 2, p. 6-7</p>	



Teaching/learning contents (guide lines) – Plumbing and Heating 10<sup>th</sup> grade  
2 teaching hours per week

<b>Topics from the Curriculum Package</b>	<b>Resources</b>	<b>Comments</b> <i>Teaching and learning focus and methods</i> <i>Linguistic aspects/teaching and learning methods</i>
BASIC ELECTRICITY	<p><b>From Electrician, Express Publishing, 2022</b> Book 1 Unit 13 Types of Wires, p. 28-29 Book 1 Unit 14 Wire Codes, p. 30-31 Book 1 Unit 6 Safety, p. 14-15 Book 1 Unit 12 Electrical Safety, p. 26-27</p> <p>Book 2 Unit 1 Electrical Connectors, p. 4-5 Book 2 Unit 2 Conduit Systems, p. 6-7 Book 2 Unit 12 Grounding Systems, p. 26-27</p>	
COMPUTER AIDED DRAWING	<p><b>From Electronics, Express Publishing, 2022</b> Book 3 Unit 1 Diagrams, p. 4-5 Book 1 Unit 13 Math, p. 28-29</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 2 Unit 11 Blueprints: Reading, p. 24-25 Book 2 Unit 12 Blueprints: Materials, p. 26-27</p>	
INSTALLATION PLUMBING	<p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 5 Basic Actions 1, p. 12-13 Book 1 Unit 6 Basic actions 2, p. 14-15 Book 1 Unit 11 Pipes, Tubes and Piping, p. 24-25</p>	

	<b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 1 Hand Tools 1, p. 4-5 Book 1 Unit 2 Hand Tools 2, p. 6-7	
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**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

## 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 of 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 – 10<sup>th</sup> grade

*From Electrician, Express Publishing, 2022*

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
<b>Book 1</b>					
	6	Safety	Reading a safety poster (true/false statements)	Safety glasses, steel toe boots, leather gloves, rubber mat, arc shield, hard hat, hot stick, arc flash blanket, arc flash clothing, electric shock	
	12	Electrical safety	Reading a safety pamphlet (true/false statements)	burn, de-energize, electrocution, hazard, live wire, lockout/tagout procedure, paralyze, risk, shock, static electricity	
	13	Types of wires	Reading an excerpt from a magazine article (multiple choice questions)	armored cable (AC), conductor, insulated, jacket, knob and tube (K&T) wiring, metal-clad (MC) cable, nonmetallic sheath (NM) cable, replace, service entrance (SE) cable, underground feeder (UF) cable	
	14	Wire codes	Reading a cheat sheet about wiring codes (multiple choice questions)	code, diameter, embossed, gauge, location, maximum, ought, rating, resistant, sheath	
<b>Book 2</b>					

	1	Electrical connectors	Reading a store webpage about connectors (true/false statements)	blade connector, clamp connector, connector, insulation displacement connector, offset connector, plug and socket connector, post connector, ring terminal, solderless connector, spade terminal, split bolt connector, terminal block connector	
	2	Conduit systems	Reading a newspaper advertisement for conduit installation (true/false statements)	building code, conduit, electrical metallic tubing, flexible, grounded, installation, moisture tight fitting, non-corrosive, nonmetallic tubing, protection, route	
	12	Grounding system	Reading an advertisement for earth grounding systems (true/false statements)	clamp, earth grounding system, equipment grounding conductor, estimate, fault current, ground, ground fault, ground rod, grounding electrode conductor, stray voltage, surge arrester	

*From Electronics, Express Publishing, 2022*

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
Book 1					
	13	Math	Reading a course description (multiple choice questions)	add, decimal, divide, formula, fraction, multiply, power, proportion, ratio, root, subtract	



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	

*From Plumbing, Express Publishing, 2022*

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
Book 1					
	1	Hand tools 1	Reading an advertisement for a hardware store (true/false statements)	ball peen hammer, chalk box, claw hammer, hacksaw, level, nut driver, Phillips screwdriver, plastic pipe saw, plumb bob, slotted screw driver, tape measure, tool box, utility knife, wallboard saw	
	2	Hand tools 2	Reading a chapter on tools (multiple choice questions)	adjustable wrench, angled jaw pliers, basin wrench, combination pliers, copper flaring tool, crimping tool, locking pliers, needle nose pliers, pipe wrench, smooth jaw pipe wrench, torque wrench, tubing cutter	
	5	Basic actions 1	Reading a chapter from a book on plumbing at	adjust, cut, mark, measure, rotate, saw, segment, slice, slide, tilt, turn	

			home (reading for specific information)		
	6	Basic actions 2	Reading an instruction manual (multiple choice questions)	drive, grasp, insert, loosen, pull, push, release, remove, tighten, turn, twist	
	11	Pipes, tubes, and tubing	Reading a pipe supplier's product list (multiple choice questions)	ABS pipe, CPVC pipe, ductile, inside diameter (ID), nominal diameter, outside diameter (OD), PE tubing, perforated pipe, PEX tubing, pipe, PVC pipe, schedule, tube, tubing	
<b>Book 2</b>					
	11	Blueprints: Reading	Reading an email from an architect to a plumber (true/false statements)	abbreviation, bird's-eye view, blueprint, dashed, dot, illustrate, isometric view, piping system, plan view, review, section view	
	12	Blueprints: Drafting	Reading a note from a contractor to a plumber (true/false statements)	drafting, drafting paper, drafting table, drafting tape, drafting triangle, illustration, isometric drafting, scale ruler, sketch	

## Resource for distribution of the teaching/learning content – 10<sup>th</sup> 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)

*From Electrician, Express Publishing, 2022*

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
Book 1							
	6	Safety	Reading a safety poster (true/false statements)	Listening to a conversation between an experienced and a new electrician (true/false statements)	Acting out a conversation between an experienced and a new electrician	Filling out the electrician's notes about what to use to drill through the floor	
	12	Electrical safety	Reading a safety pamphlet (true/false statements)	Listening to a conversation between two electricians (multiple choice questions);  Completing a conversation	Acting out a dialogue between two electricians	Filling out a safety checklist	

	13	Types of wires	Reading an excerpt from a magazine article (multiple choice questions)	Listening to a conversation between a homeowner and an electrician (true/false statements);  Completing a conversation	Acting out a dialogue between an electrician and a new homeowner	Filling out a customer feedback form	
	14	Wire codes	Reading a cheat sheet about wiring codes (multiple choice questions)	Listening to a conversation between two electricians (true/false statements); Completing a conversation	Acting out a dialogue between two electricians	Filling out a work record	
<b>Book 2</b>							
	1	Electrical connectors	Reading a store webpage about connectors (true/false statements)	Listening to a conversation between an electrician and a supplier (multiple choice questions); Completing a conversation	Acting out a dialogue between an electrician and a supplier	Filling out a purchase order form	
	2	Conduit systems	Reading a newspaper advertisement for conduit installation (true/false statements)	Listening to a conversation between an electrician and a building owner (multiple choice questions);	Acting out a dialogue between an electrician and a building owner	Filling out an electrician's work order	

				Completing a conversation			
	12	Grounding system	Reading an advertisement for earth grounding systems (true/false statements)	Listening to a conversation between a customer service rep and a customer (multiple choice questions); Completing a conversation	Acting out a dialogue between a customer service representative and a customer	Completing an advertisement	

*From Electronics, Express Publishing, 2022*

<b>Book 1</b>							
	13	Math	Reading a course description (multiple choice questions)	Listening to a conversation between a student and a teacher (true/false statements);  Completing a conversation	Acting out a dialogue between a student and a teacher	Writing a reason for taking a math course and some skills that will be useful	
<b>Book 3</b>							
	1	Diagrams	Reading a magazine article (multiple choice questions)	Listening to a conversation between two electronics techs	Acting out a dialogue between two electronics techs	Writing an excerpt from an article on reading electronics manuals	

				(true/false statements); Completing a conversation			
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*From Plumbing, Express Publishing, 2022*

Book 1							
	1	Hand tools 1	Reading an advertisement for a hardware store (true/false statements)	Listening to a conversation between a hardware store clerk and a plumber (multiple choice questions); Completing a conversation	Acting out a dialogue between a hardware store clerk and a plumber	Filling out a customer feedback form	
	2	Hand tools 2	Reading a chapter on tools (multiple choice questions)	Listening to a conversation between a plumbing company owner and a plumber (true/false statements); Completing a conversation	Acting out a dialogue between a plumbing company owner and a plumber	Filling out a purchase request	

	5	Basic actions 1	Reading a chapter from a book on plumbing at home (reading for specific information)	Listening to a conversation between two plumbers (true/false statements); Completing a conversation	Acting out a dialogue between two plumbers	Filling out a chapter summary	
	6	Basic actions 2	Reading an instruction manual (multiple choice questions)	Listening to a conversation between a plumber and an assistant (true/false statements); Completing a conversation	Acting out a dialogue between a plumber and an assistant		
	11	Pipes, tubes, and tubing	Reading a pipe supplier's product list (multiple choice questions)	Listening to a conversation between two plumbers (true/false statements); Completing a conversation	Acting out a dialogue between two plumbers	Filling out a pipe order adjustment form	
<b>Book 2</b>							
	11	Blueprints: Reading	Reading an email from an architect to a plumber (true/false statements)	Listening to a conversation between a plumber and an architect (multiple choice questions);	Acting out a dialogue between a plumber and an architect	Filling out an architect's notes	

				Completing a conversation			
	12	Blueprints: Drafting	Reading a note from a contractor to a plumber (true/false statements)	Listening to a conversation between a plumber and a contractor (multiple choice questions); Completing a conversation	Acting out a dialogue between a plumber and a contractor	Filling out a contracting plan	



## GRADE 11

### Description of module content and learning objectives

<p>Module objectives</p> <p>11<sup>th</sup> grade</p> <p>Module 1</p> <p>Focus on vocabulary</p> <p>Use of terminology in the foreign language</p>	<p>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.</p> <p>Students learn and practice <b>how to</b>:</p> <p>General linguistic range</p> <ul style="list-style-type: none"> <li>• Use simple and more complex structures correctly but still systematically makes some mistakes</li> <li>• 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</li> <li>• Clearly pronounce familiar words although repetition is needed from time to time</li> <li>• produce sounds in the target language if carefully guided. It may affect intelligibility, requiring collaboration from interlocutors.</li> <li>• Use effectively and close to independently a repertoire of basic language which enables them to deal with everyday situations with predictable</li> <li>• Convey very basic content, though they will generally have to compromise the message and search for words/signs.</li> <li>• 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.</li> </ul>
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	<p>Vocabulary range</p> <ul style="list-style-type: none"> <li>• use sufficient vocabulary to conduct routine everyday transactions involving familiar situations and topics.</li> <li>• Express using sufficient vocabulary basic communicative needs.</li> <li>• Cope with survival and routine needs using sufficient vocabulary for coping.</li> <li>• Communicate using a good range of vocabulary related to familiar topics and everyday situations.</li> </ul> <p>Grammatical accuracy</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Use a range of structures correctly, but still systematically makes mistakes; nevertheless, it is usually clear what they are trying to say.</li> <li>• Communicate using reasonably accurately a repertoire of frequently used “routines” and patterns associated with more predictable situations.</li> </ul> <p>Vocabulary control</p> <ul style="list-style-type: none"> <li>• control a narrow repertoire dealing with concrete, everyday needs and in professional context</li> <li>• Clearly pronounce enough to be understood, but conversational partners will need to ask for repetition from time to time.</li> <li>• 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.</li> <li>• Demonstrate an intelligible pronunciation when communicating in simple everyday situations, provided the interlocutor makes an effort to understand specific sounds.</li> <li>• 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.</li> <li>• 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.</li> </ul>
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<p>Module 2</p> <p>Professional communication in the foreign language</p>	<ul style="list-style-type: none"> <li>• Language features (e.g. word stress) are adequate for familiar everyday words and simple utterances.</li> </ul> <p>Students learn and practice <b>how to</b> Interact with colleagues or customers generally and more specifically for the level <b>how to</b>:</p> <p>Verbally</p> <ul style="list-style-type: none"> <li>• Can make and respond to invitations, suggestions, apologies, etc. using learnt phrases and memorized exchanges</li> <li>• Can handle very short social exchanges, using everyday polite forms of greeting and address</li> <li>• Can expand learnt phrases through simple recombination of their elements</li> <li>• Can ask for attention</li> <li>• adapt well-rehearsed, memorised, simple phrases to particular circumstances through limited lexical substitution and difficulties in articulating less familiar words is usual.</li> <li>• Can expand learnt phrases through simple recombinations of their elements.</li> <li>• Can use simple techniques to start, maintain or close a short conversation.</li> <li>• Can give an example of something in a very simple text using “like” or “for example”.</li> <li>• Can communicate what they want to say in a simple and direct exchange of limited information on familiar</li> <li>• communicate basic information about basic professional details and needs of a concrete type in a simple way.</li> <li>• communicate very basic information about professional topics in a simple way, while pausing is expected and usual to search for expressions</li> <li>• manage very short, isolated, rehearsed utterances using gesture and signalled requests for help when necessary.</li> </ul> <ul style="list-style-type: none"> <li>• Can perform and respond to basic language functions, e.g. information exchange and requests, and express opinions and attitudes in a simple way.</li> <li>• Can socialise simply but effectively using the simplest common expressions and following basic routines.</li> </ul>
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### 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 for the Module

Level of language skills	General language skills	Professional language skills	Examples  Teaching and learning resources developing these occupational skills
<b>Understanding</b>  Listening <b>A2</b>	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.	<ul style="list-style-type: none"> <li>➤ can understand phrases and expressions related to the most immediate priority in the work environment</li> <li>➤ can identify the topic of discussion</li> <li>➤ can follow speech which is very slow and carefully articulated</li> <li>➤ can understand instructions addressed carefully and slowly</li> <li>➤ Can catch the main point in short, clear, simple message and announcements</li> <li>➤ Can understand simple technical information, such as operating instructions for everyday equipment if clearly and slowly articulated</li> <li>➤ Can extract the essential information from short, recorded passages dealing with predictable everyday work matters</li>   <li>➤ can understand enough to be able to meet needs of a concrete type provided speech is clearly and slowly articulated</li> <li>➤ Can follow in outline short, simple social exchanges, conducted very slowly and clearly.</li> <li>➤ Can generally identify the topic of discussion around them when it is conducted slowly and clearly.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b> Book 2 Exercises 5, 6 and 7 from Unit 15 Electrical Safety at Home, p. 32-33</p> <p>Book 3 Exercises 5, 6 and 7 from Unit 7 Ceiling Fans, p. 16-17</p> <p><b>Plumbing, Express Publishing, 2022</b> Book 1 Exercises 5, 6 and 7 from Unit 3 Power Tools, p. 8-9 Book 1 Exercises 5, 6 and 7 from Unit 4 Safety Equipment, p. 10-11 Book 1 Exercises 5, 6 and 7 from Unit 7 Materials, p. 16-17 Book 1 Exercises 5, 6 and 7 from Unit 9 Measurements, p. 20-21 Book 1 Exercises 5, 6 and 7 from Unit 10 Properties and Dimensions, p. 20-21 Book 1 Exercises 5, 6 and 7 from Unit 11 Pipes, Tubes and Tubing, p. 22-23</p> <p>Book 2 Exercises 5, 6 and 7 from Unit 6 Gas Water Heaters, p. 14-15 Book 2 Exercises 5, 6 and 7 from Unit 7 Electric Water Heaters, p. 16-17 Book 2 Exercises 5, 6 and 7 from Unit 8 Water Heaters: Other, p. 18-19 Book 2 Exercises 5, 6 and 7 from Unit 10 Site Communication, p. 22-23 Book 2 Exercises 5, 6 and 7 from Unit 13 Organizing Materials, p. 28-29</p>

		<ul style="list-style-type: none"> <li>➤ Can recognise when people agree and disagree in a conversation conducted slowly and clearly.</li> <li>➤ Can understand and follow a series of instructions for familiar everyday activities such as sports, cooking, etc., provided they are delivered slowly and clearly.</li> </ul>	<p>Book 2 Exercises 5, 6 and 7 from Unit 14 Handling Materials, p. 30-31 Book 2 Exercises 5, 6 and 7 from Unit 15 Layout, p. 32-33</p> <p>Book 3 Exercises 5, 6 and 7 from Unit 8 Water Heater Installation, p. 18-19 Book 3 Exercises 5, 6 and 7 from Unit 15 Water Heaters, p. 32-33</p>
<p>Reading <b>A1+ to A2</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>➤ can read and extract the necessary information related to working environment and the occupation.</li> <li>➤ can extract the important information and main points from short specialised texts, manuals, orders, instructions, etc.</li> <li>➤ can get a general understanding of a occupation-specific text.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b> Book 2 Exercises 2, 3 and 4 from Unit 15 Electrical Safety at Home, p. 32-33</p> <p>Book 3 Exercises 2, 3 and 4 from Unit 7 Ceiling Fans, p. 16-17</p> <p><b>Plumbing, Express Publishing, 2022</b> Book 1 Exercises 2, 3 and 4 from Unit 3 Power Tools, p. 8-9 Book 1 Exercises 2, 3 and 4 from Unit 4 Safety Equipment, p. 10-11 Book 1 Exercises 2, 3 and 4 from Unit 7 Materials, p. 16-17 Book 1 Exercises 2, 3 and 4 from Unit 9 Measurements, p. 20-21 Book 1 Exercises 2, 3 and 4 from Unit 10 Properties and Dimensions, p. 20-21 Book 1 Exercises 2, 3 and 4 from Unit 11 Pipes, Tubes and Tubing, p. 22-23</p> <p>Book 2 Exercises 2, 3 and 4 from Unit 6 Gas Water Heaters, p. 14-15 Book 2 Exercises 2, 3 and 4 from Unit 7 Electric Water Heaters, p. 16-17 Book 2 Exercises 2, 3 and 4 from Unit 8 Water Heaters: Other, p. 18-19 Book 2 Exercises 2, 3 and 4 from Unit 10 Site Communication, p. 22-23</p>

			<p>Book 2 Exercises 2, 3 and 4 from Unit 13 Organizing Materials, p. 28-29</p> <p>Book 2 Exercises 2, 3 and 4 from Unit 14 Handling Materials, p. 30-31</p> <p>Book 2 Exercises 2, 3 and 4 from Unit 15 Layout, p. 32-33</p> <p>Book 3 Exercises 2, 3 and 4 from Unit 8 Water Heater Installation, p. 18-19</p> <p>Book 3 Exercises 2, 3 and 4 from Unit 15 Water Heaters, p. 32-33</p>
<p><b>Speaking</b></p> <p>Spoken interaction</p> <p><b>A1+ to A2</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>➤ can exchange information on a variety of simple and routine matters directly related to the immediate work environment.</li> <li>➤ can ask questions, confirm information and avoid misunderstanding</li> <li>➤ can handle a simple conversation in order to obtain goods and services</li> <li>➤ can handle simple social exchanges with customers/colleagues, e.g. introductions, invitations, apologies.</li> <li>➤ can ask and answer simple questions about someone's preferences, requests, purchases and orders.</li> <li>➤ can ask and answer questions about my own area of work using simple language.</li> <li>➤ can ask for and give directions referring to a map or plan.</li> <li>➤ can discuss in a very simple way events, activities and plans.</li> <li>➤ can take simple telephone calls or put callers through.</li> <li>➤ can make arrangements concerning meeting points/date/time/arrival and departure, when simple language is used.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b></p> <p>Book 2 Exercises 1, 7 and 8 from Unit 15 Electrical Safety at Home, p. 32-33</p> <p>Book 3 Exercises 1, 7 and 8 from Unit 7 Ceiling Fans, p. 16-17</p> <p><b>Plumbing, Express Publishing, 2022</b></p> <p>Book 1 Exercises 1, 7 and 8 from Unit 3 Power Tools, p. 8-9</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 4 Safety Equipment, p. 10-11</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 7 Materials, p. 16-17</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 9 Measurements, p. 20-21</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 10 Properties and Dimensions, p. 20-21</p> <p>Book 1 Exercises 1, 7 and 8 from Unit 11 Pipes, Tubes and Tubing, p. 22-23</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 6 Gas Water Heaters, p. 14-15</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 7 Electric Water Heaters, p. 16-17</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 8 Water Heaters: Other, p. 18-19</p>

			<p>Book 2 Exercises 1, 7 and 8 from Unit 10 Site Communication, p. 22-23</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 13 Organizing Materials, p. 28-29</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 14 Handling Materials, p. 30-31</p> <p>Book 2 Exercises 1, 7 and 8 from Unit 15 Layout, p. 32-33</p> <p>Book 3 Exercises 1, 7 and 8 from Unit 8 Water Heater Installation, p. 18-19</p> <p>Book 3 Exercises 1, 7 and 8 from Unit 15 Water Heaters, p. 32-33</p>
Spoken production <b>A1+</b>	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.	<ul style="list-style-type: none"> <li>➤ can describe myself and my environment, using simple language.</li> <li>➤ can give a simple account of my work place, my job or company.</li> <li>➤ can produce simple mainly isolated phrases about people and places related to my occupation.</li> <li>➤ can read a very short, rehearsed statement – e.g. to introduce a person, propose a product.</li> </ul>	<p>Oral production (speaking) activities:</p> <ul style="list-style-type: none"> <li>▪ The language user produces an oral text which is received by an audience of one or more listeners.</li> <li>▪ Examples: reading a written text aloud, speaking from notes or visual aids (diagram, pictures, charts, etc.)</li> <li>▪ Acting out a rehearsed role</li> </ul> <p>See above exercises for speaking interaction:</p> <ul style="list-style-type: none"> <li>▪ Distribute role cards – students read their role cards</li> <li>▪ Write a diagram of the role play words/sentences on the board</li> </ul>
Writing <b>A1+</b>	Can write short, simple notes and messages. Can write a very simple personal letter, for example thanking someone for something.	<ul style="list-style-type: none"> <li>➤ can write short letters, messages, e-mail messages, memos following a sample</li> <li>➤ can write SMSs using standard abbreviations.</li> <li>➤ can take notes related to matters of immediate interest in work</li> <li>➤ can fill in forms with personal details (job, age, address, etc.</li> <li>➤ can write simple isolated phrases and sentences, which I have memorized or copied.</li> </ul>	<p><b>From Electrician, Express Publishing, 2022</b></p> <p>Book 2 Exercise 9 from Unit 15 Electrical Safety at Home, p. 32-33</p> <p>Book 3 Exercise 9 from Unit 7 Ceiling Fans, p. 16-17</p> <p><b>Plumbing, Express Publishing, 2022</b></p> <p>Book 1 Exercise 9 from Unit 3 Power Tools, p. 8-9</p> <p>Book 1 Exercise 9 from Unit 4 Safety Equipment, p. 10-11</p> <p>Book 1 Exercise 9 from Unit 7 Materials, p. 16-17</p> <p>Book 1 Exercise 9 from Unit 9 Measurements, p. 20-21</p>



		<p>➤ 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.</p>	<p>Book 1 Exercise 9 from Unit 10 Properties and Dimensions, p. 20-21            Book 1 Exercise 9 from Unit 11 Pipes, Tubes and Tubing, p. 22-23</p> <p>Book 2 Exercise 9 from Unit 6 Gas Water Heaters, p. 14-15            Book 2 Exercise 9 from Unit 7 Electric Water Heaters, p. 16-17            Book 2 Exercise 9 from Unit 8 Water Heaters: Other, p. 18-19            Book 2 Exercise 9 from Unit 10 Site Communication, p. 22-23            Book 2 Exercise 9 from Unit 13 Organizing Materials, p. 28-29            Book 2 Exercise 9 from Unit 14 Handling Materials, p. 30-31            Book 2 Exercise 9 from Unit 15 Layout, p. 32-33</p> <p>Book 3 Exercise 9 from Unit 8 Water Heater Installation, p. 18-19            Book 3 Exercise 9 from Unit 15 Water Heaters, p. 32-33</p>
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## Teaching/learning contents (guide lines) – Cooling, Heating and Climatization 11<sup>th</sup> grade

2 teaching hours per week

<b>Topics from the Curriculum Package</b>	<b>Resources</b>	<b>Comments Teaching and learning focus and methods Linguistic aspects/teaching and learning methods</b>
HEATING INSTALLATION	<p><b>From Electrician, Express Publishing, 2022</b> Book 2 Unit 15 Electrical Safety at Home, p. 32-33</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 2 Unit 6 Gas Water Heaters, p. 14-15 Book 2 Unit 7 Electric Water Heaters, p. 16-17 Book 2 Unit 8 Water Heaters: Other, p. 18-19</p> <p>Book 3 Unit 8 Water Heater Installation, p. 18-19 Book 3 Unit 15 Water Heaters, p. 32-33</p>	
REFREGERATION AND AIR CONDITIONING	<p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 3 Power Tools, p. 8-9</p> <p>Book 2 Unit 14 Handling Materials, p. 30-31 Book 2 Unit 15 Layout, p. 32-33</p>	

<p><b>INDUSTRIAL COOLING</b></p>	<p><b>From Plumbing, Express Publishing, 2022</b> Book 2 Unit 10 Site Communication, p. 22-23 Book 2 Unit 13 Organizing Materials, p. 28-29</p> <p><b>From Electrician, Express Publishing, 2022</b> Book 3 Unit 7 Ceiling Fans, p. 16-17</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 4 Safety Equipment, p. 10-11 Book 1 Unit 7 Materials, p. 16-17 Book 1 Unit 9 Measurements, p. 20-21 Book 1 Unit 11 Pipes, Tubes and Tubing, p. 22-23 Book 1 Unit 10 Properties and Dimensions, p. 20-21</p> <p><b>Additional materials:</b> Importance of plumbing and sanitation systems: <a href="https://supremepipe.com/blog/plumbing-and-sanitary-needs-philippines/">https://supremepipe.com/blog/plumbing-and-sanitary-needs-philippines/</a></p> <p>Household plumbing inspection checklist: <a href="https://www.thespruce.com/plumbing-maintenance-checklist-2718687">https://www.thespruce.com/plumbing-maintenance-checklist-2718687</a></p> <p>Comparing whole-house ventilation systems: <a href="https://www.energy.gov/energysaver/whole-house-ventilation">https://www.energy.gov/energysaver/whole-house-ventilation</a></p> <p>Cooling and Heating Systems: <a href="https://www.carrier.com/residential/en/ca/homeowner-resources/hvac-basics/types-of-heating-and-cooling-systems-explained/">https://www.carrier.com/residential/en/ca/homeowner-resources/hvac-basics/types-of-heating-and-cooling-systems-explained/</a></p>	
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## Teaching/learning contents (guide lines) – Plumbing and Heating 11<sup>th</sup> grade

2 teaching hours per week

<b>Topics from the Curriculum Package</b>	<b>Resources</b>	<b>Comments Teaching and learning focus and methods Linguistic aspects/teaching and learning methods</b>
<b>HEATING INSTALLATION</b>	<p><b>From Plumbing, Express Publishing, 2022</b> Book 2 Unit 10 Site Communication, p. 22-23 Book 2 Unit 13 Organizing Materials, p. 28-29</p> <p><b>From Electrician, Express Publishing, 2022</b> Book 3 Unit 7 Ceiling Fans, p. 16-17</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 4 Safety Equipment, p. 10-11 Book 1 Unit 7 Materials, p. 16-17 Book 1 Unit 9 Measurements, p. 20-21 Book 1 Unit 11 Pipes, Tubes and Tubing, p. 22-23 Book 1 Unit 10 Properties and Dimensions, p. 20-21</p>	
<b>COOLING CIRCUITS</b>	<p><b>From Plumbing, Express Publishing, 2022</b> Book 1 Unit 3 Power Tools, p. 8-9</p> <p>Book 2 Unit 14 Handling Materials, p. 30-31 Book 2 Unit 15 Layout, p. 32-33</p>	

<p><b>WATER TREATMENT AND WASTEWATER</b></p>	<p><b>From Electrician, Express Publishing, 2022</b> Book 2 Unit 15 Electrical Safety at Home, p. 32-33</p> <p><b>From Plumbing, Express Publishing, 2022</b> Book 2 Unit 6 Gas Water Heaters, p. 14-15 Book 2 Unit 7 Electric Water Heaters, p. 16-17 Book 2 Unit 8 Water Heaters: Other, p. 18-19</p> <p>Book 3 Unit 8 Water Heater Installation, p. 18-19 Book 3 Unit 15 Water Heaters, p. 32-33</p>	
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### 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

## 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 of 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 – 11<sup>th</sup> grade

*From Electrician, Express Publishing, 2022*

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
<b>Book 2</b>					
	15	Electrical safety at home	Reading a website article on electrical safety (true/false statements)	adapter, baseboard, breaker box, fail, flammable, permanent, prevention, safety cover, securely, temporary, traffic, worn out, zip cord	
<b>Book 3</b>					
	7	Ceiling fans	Reading an instruction manual on a ceiling fan (reading for specific information)	ceiling fan, circulate, clearance, cross support, follow, independently, remote control, stable, swing-up, variable-speed, wobble	

From Plumbing, Express Publishing, 2022

	Unit	Topic	Reading	Vocabulary/ Target words and phrases	Comments / additional target words and phrases
Book 1					
	3	Power tools	Reading a catalogue (true/false statements)	air compressor, circular saw, drill bit, grinder, hammer drill, jackhammer, pistol drill, reciprocating saw, right angle drill, saber saw	
	4	Safety equipment	Reading a poster on safety guidelines (true/false statements)	dust mask, earplugs, face shield, first aid kit, goggles, grip gloves, hard hat, kneepads, leather gloves, safety glasses, steel-toed boots	
	7	Materials	Reading a page from a plumbing supply catalogue (multiple choice questions)	brass, cast iron, chrome, copper, plastic, porcelain, rubber, stainless steel, steel	
	9	Measurements	Reading a website for a pipe supplier (true/false statements)	centimeter, conversion, imperial, inch, kilogram, kPa, metric, millimeter, pound, psi	
	10	Properties and dimensions	Reading an email from a plumbing company owner (true/false statements)	depth, durability, flexible, height, length, rigid, strength, thickness, weight, width	
	11	Pipes, tubes, and tubing	Reading a pipe supplier's product list (multiple choice questions)	ABS pipe, CPVC pipe, ductile, inside diameter (ID), nominal diameter, outside diameter (OD), PE tubing, perforated pipe, PEX tubing, pipe, PVC pipe, schedule, tube, tubing	

Book 2					
	6	Gas water heaters	Reading a safety warning for a gas water heater (true/false statements)	baffle tube, BTU, burner assembly, dip tube, exhaust, flue pipe, gas regulator, gas water heater, natural gas, pilot light, propane, thermocouple	
	7	Electric water heaters	Reading a magazine article on electric water heaters (true/false statements)	electric water heater, exceed, expensive, heating element, high limit, recovery rate, storage tank, temperature rise, thermostat, venting	
	8	Water heaters: Other	Reading an advertisement for water heaters (true/false statements)	circulate, circulating pump, conserve, installation costs, instantaneous, point-of-use water heater, solar collector, solar water heater, tankless water heater, volume	
	10	Site communication	Reading a memo (true/false statements)	building permit, carry, confirm, consult, contact, email, post, rough-in sheet, smartphone, two-way radio, work order	
	13	Organizing materials	Reading a handbook (true/false statements)	bagging and tagging, location, material tracking chart, materials list, on-site, order, pallet, procure, store, warehouse	
	14	Handling materials	Reading a notice (reading for specific information)	back support, dolly, forklift, handle, manual labor, pallet jack, pipe carrier, pipe cart, transport, vehicle rack, weight capacity	
	15	Layouts	Reading a textbook excerpt (reading for specific information)	above-ground layout, batter board, excavate, layout, pipe route, pull a string line, trench, trench layout, underground layout, wall layout	

Book 3					
	8	Water heater installation	Reading an installation guide for a water heater (multiple choice questions)	clearance, dielectric union, drip leg, electrolysis, expansion tank, finished area, gas supply pipe, position, safety pan, service panel, solution, termination point	
	15	Water heaters	Reading a brochure on water heaters (reading for specific information)	build up, circuit breaker, defective, disconnect, fume, gas regulator, leg, line voltage, odor, reset button, retainer clip, safety guard, volt	

## Resource for distribution of the teaching/learning content – 11<sup>th</sup> 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)

*From Electrician, Express Publishing, 2022*

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
<b>Book 2</b>							
	15	Electrical safety at home	Reading a website article on electrical safety (true/false statements)	Listening to a conversation between an electrician and an owner (multiple choice questions); Completing a conversation	Acting out a dialogue between an electrician and an owner	Filling out suggestions given by an electrician	Electrical safety at home
<b>Book 3</b>							
	7	Ceiling fans	Reading an instruction manual on a ceiling fan (reading for specific information)	Listening to a conversation between two electricians (true/false statements); Completing a conversation	Acting out a dialogue between two electricians	Writing an electrician's work report	Ceiling fans

*From Plumbing, Express Publishing, 2022*

	Unit	Topic	Reading	Listening	Speaking	Writing	Comments
Book 1							
	3	Power tools	Reading a catalogue (true/false statements)	Listening to a conversation between a clerk and a plumber (multiple choice questions);  Completing a conversation	Acting out a dialogue between a clerk and a plumber	Filling out a catalogue order form	
	4	Safety equipment	Reading a poster on safety guidelines (true/false statements)	Listening to a conversation between a supervisor and a plumber (multiple choice questions);  Completing a conversation	Acting out a dialogue between a supervisor and a plumber	Filling out an incident report	
	7	Materials	Reading a page from a plumbing supply catalogue (multiple choice questions)	Listening to a conversation between a plumber and a hardware store clerk (true/false statements);	Acting out a dialogue between a plumber and a hardware store clerk	Filling out an exchange form	

				Completing a conversation			
	9	Measurements	Reading a website for a pipe supplier (true/false statements)	Listening to a conversation between two plumbers (multiple choice questions);  Completing a conversation	Acting out a dialogue between a plumber and a supervisor	Filling out a memo	
	10	Properties and dimensions	Reading an email from a plumbing company owner (true/false statements)	Listening to a conversation between a plumber and a homeowner (multiple choice questions);  Completing a conversation	Acting out a dialogue between a plumber and a homeowner	Filling out a work order	
	11	Pipes, tubes, and tubing	Reading a pipe supplier's product list (multiple choice questions)	Listening to a conversation between two plumbers (true/false statements);  Completing a conversation	Acting out a dialogue between two plumbers	Filling out a pipe order adjustment form	
<b>Book 2</b>							
	6	Gas water heaters	Reading a safety warning for a gas	Listening to a conversation between a plumber and a	Acting out a dialogue between a plumber and a customer	Filling out a plumber's notes	



			water heater (true/false statements)	homeowner (multiple choice questions);  Completing a conversation			
	7	Electric water heaters	Reading a magazine article on electric water heaters (true/false statements)	Listening to a conversation between a salesman and a plumber in a hardware store (multiple choice questions);  Completing a conversation	Acting out a dialogue between a salesman and a plumber in a hardware store	Filling out a plumber's notes	
	8	Water heaters: Other	Reading an advertisement for water heaters (true/false statements)	Listening to a conversation between a store clerk and a customer in a hardware store (multiple choice questions);  Completing a conversation	Acting out a dialogue between a store clerk and a customer in a hardware store	Filling out a customer's notes	
	10	Site communication	Reading a memo (true/false statements)	Listening to a conversation between a plumbing company owner and a plumber (multiple choice questions); Completing a conversation	Acting out a dialogue between a plumbing company owner and a plumber	Filling out a work order	

	13	Organizing materials	Reading a handbook (true/false statements)	Listening to a conversation between two plumbers (multiple choice questions);  Completing a conversation	Acting out a dialogue between two plumbers	Filling out a materials list	
	14	Handling materials	Reading a notice (reading for specific information)	Listening to a conversation between a supervisor and an employee (multiple choice questions);  Completing a conversation	Acting out a dialogue between a supervisor and an employee	Filling out a safety report	
	15	Layouts	Reading a textbook excerpt (reading for specific information)	Listening to a conversation between a plumber and an architect (true/false statements);  Completing a conversation	Acting out a dialogue between a plumber and an architect	Filling out an architect's notes about layout changes	

Book 3							
	8	Water heater installation	Reading an installation guide for a water heater (multiple choice questions)	Listening to a conversation between a contractor and a plumber (true/false statements);  Completing a conversation	Acting out a dialogue between a contractor and a plumber	Writing a contractor's notes about water heater installation	
	15	Water heaters	Reading a brochure on water heaters (reading for specific information)	Listening to a conversation between a new plumber and an experienced plumber (true/false statements);  Completing a conversation	Acting out a dialogue between a new plumber and an experienced plumber	Filling out a plumber's work report	

## 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 grades is **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)<sup>1</sup>. 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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<sup>1</sup> 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 all grades. 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.

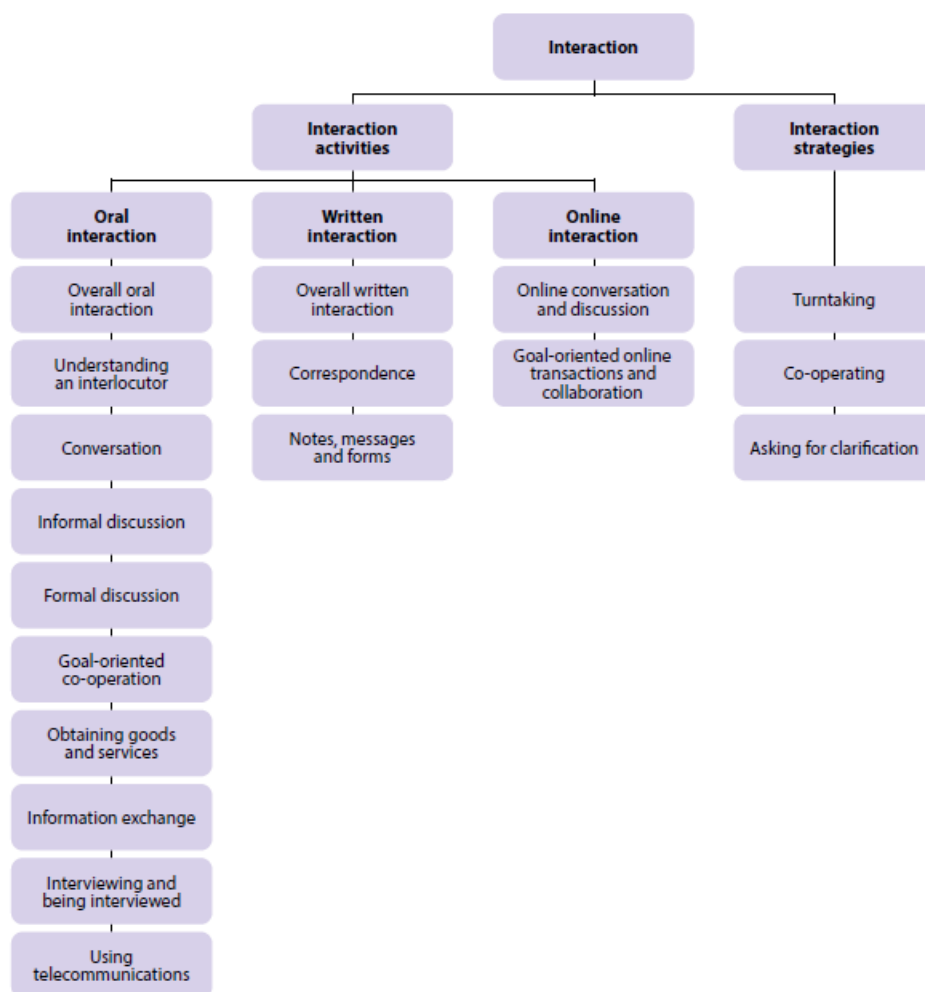


Fig. 1. Interactive activities and strategies (summary).

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.

<b>B1</b>	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).
<b>A2</b>	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.
<b>A1</b>	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.
<b>Pre-A1</b>	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.

<b>B1</b>	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.
<b>A2</b>	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.
<b>A1</b>	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.
<b>Pre-A1</b>	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
  - setting: from short exchanges, through maintaining a conversation and sustaining relationships, to flexible use for social purposes;
  - topics: from personal news, through familiar topics of personal interest, to most general topics;
  - language functions: from greetings, etc., through offers, invitations and permission, to degrees of emotion and allusive, joking usage.

<b>B1</b>	<p>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.</p> <p>Can have relatively long conversations on subjects of common interest, provided the interlocutor makes an effort to support understanding.</p>
<b>B1</b>	<p>Can enter unprepared into conversations on familiar topics.</p> <p>Can follow clearly articulated language directed at them in everyday conversation, though will sometimes have to ask for repetition of particular words/signs.</p> <p>Can maintain a conversation or discussion but may sometimes be difficult to follow when trying to express exactly what they would like to.</p> <p>Can express and respond to feelings such as surprise, happiness, sadness, interest and indifference.</p>
<b>A2</b>	<p>Can establish social contact (e.g. greetings and farewells, introductions, giving thanks).</p> <p>Can generally understand clear, standard language on familiar matters directed at them, provided they can ask for repetition or reformulation from time to time.</p> <p>Can participate in short conversations in routine contexts on topics of interest.</p> <p>Can express how they feel in simple terms, and express thanks.</p> <p>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.</p>
<b>A2</b>	<p>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.</p> <p>Can use simple, everyday, polite forms of greeting and address.</p> <p>Can converse in simple language with peers, colleagues or members of a host family, asking questions and understanding answers relating to most routine matters.</p> <p>Can make and respond to invitations, suggestions and apologies.</p> <p>Can express how they are feeling, using very basic stock expressions.</p> <p>Can state what they like and dislike.</p>
<b>A1</b>	<p>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.</p> <p>Can take part in a simple conversation of a basic factual nature on a predictable topic (e.g. their home country, family, school).</p> <p>Can make an introduction and use basic greeting and leave-taking expressions.</p> <p>Can ask how people are and react to news.</p>
<b>Pre-A1</b>	<p>Can understand and use basic, formulaic expressions such as "Yes", "No", "Excuse me", "Please", "Thank you", "No thank you", "Sorry".</p> <p>Can recognise simple greetings.</p> <p>Can greet people, state their name and take leave in a simple way.</p>

*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.
  - topics: from what to do and where to go, to abstract, complex and even unfamiliar topics and sensitive issues;
  - ability to follow the discussion: from identifying the topic, through following the main points, to keeping up with animated discussion and understanding colloquial references;
  - language functions: from discussing and (dis)agreeing in a limited way to expressing ideas with precision and dealing diplomatically with disagreement and criticism.

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

*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.

<b>B1</b>	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.
<b>A2</b>	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.
<b>A1</b>	<i>No descriptors available</i>
<b>Pre-A1</b>	<i>No descriptors available</i>

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.

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

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.

<b>B1</b>	<p>Can deal with most transactions likely to arise while travelling, arranging travel or accommodation, or dealing with authorities during a foreign visit.</p> <p>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.</p> <p>Can cope with less routine situations in shops, post offices, banks, e.g. returning an unsatisfactory purchase.</p> <p>Can make a complaint.</p> <p>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.</p>
<b>A2</b>	<p>Can deal with common aspects of everyday living such as travel, lodging, eating and shopping.</p> <p>Can interact in predictable everyday situations (e.g. post office, station, shop), using a wide range of simple expressions.</p> <p>Can get all the information needed from a tourist office, as long as it is of a straightforward, non-specialised nature.</p> <p>Can ask for and provide everyday goods and services.</p> <p>Can get simple information about travel, use public transport (e.g. buses, trains, taxis), ask and give directions, and buy tickets.</p> <p>Can ask about things and make simple transactions in shops, post offices or banks.</p> <p>Can give and receive information about quantities, numbers, prices, etc.</p> <p>Can make simple purchases by stating what is wanted and asking the price.</p> <p>Can order a meal.</p> <p>Can point out when something is wrong (e.g. "The food is cold" or "There is no light in my room").</p> <p>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.</p>
<b>A1</b>	<p>Can ask people for things and give people things.</p> <p>Can ask for food and drink using basic expressions.</p> <p>Can handle numbers, quantities, cost and time.</p>
<b>Pre-A1</b>	<p>Can make simple purchases and/or order food or drink when pointing or other gesture can support the verbal reference.</p>



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.

<b>B1</b>	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.
<b>B1</b>	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.
<b>A2</b>	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.
<b>A2</b>	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.
<b>A1</b>	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).
	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”.
<b>Pre-A1</b>	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.
	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.
<b>Pre-A1</b>	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.

<b>B1</b>	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.
<b>B1</b>	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.
<b>A2</b>	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.
<b>A1</b>	Can indicate in simple language the nature of a problem to a health professional, perhaps using gestures and body language.
	Can reply in an interview to simple direct questions, put very slowly and clearly in direct, non-idiomatic language, about personal details.
<b>A1</b>	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.

<b>B1</b>	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).
<b>A2</b>	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).
<b>A2</b>	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.

<b>B1</b>	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.
<b>A2</b>	Can compose short, simple formulaic notes relating to matters in areas of immediate need.
<b>A1</b>	Can ask for or pass on personal details.
<b>Pre-A1</b>	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.

<b>B1</b>	<p>Can compose personal letters giving news and expressing thoughts about abstract or cultural topics such as music or film.</p> <p>Can compose letters expressing different opinions and giving detailed accounts of personal feelings and experiences.</p> <p>Can reply to an advertisement in writing and ask for further information on items that interest them.</p> <p>Can compose basic formal e-mails/letters (e.g. to make a complaint and request action).</p>
	<p>Can compose personal letters describing experiences, feelings and events in some detail.</p> <p>Can compose basic e-mails/letters of a factual nature (e.g. to request information or to ask for and give confirmation).</p> <p>Can compose a basic letter of application with limited supporting details.</p>
<b>A2</b>	<p>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).</p>
	<p>Can convey personal information of a routine nature, for example in a short e-mail or letter introducing themselves.</p> <p>Can compose very simple personal letters expressing thanks and apology.</p> <p>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).</p> <p>Can compose a short text in a greetings card (e.g. for someone's birthday or to wish them a Happy New Year).</p>
	<p>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.</p>
<b>A1</b>	<p>Can compose a short, simple postcard.</p> <p>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.</p>
<b>Pre-A1</b>	<p>Can convey basic personal information in short phrases and sentences, with reference to a dictionary.</p>

*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.

<b>B1</b>	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.
<b>A2</b>	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).
<b>A1</b>	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.").
<b>Pre-A1</b>	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.

<b>B1</b>	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.
<b>A2+</b>	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.
<b>A2</b>	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.
<b>A1</b>	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.
	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).
<b>Pre-A1</b>	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.
	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.
<b>Pre-A1</b>	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.
	Can post simple online greetings, using basic formulaic expressions and emoticons.
<b>Pre-A1</b>	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.

	<p>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.</p> <p>Can interact online with a group that is working on a project, following straightforward instructions, seeking clarification and helping to accomplish the shared tasks.</p>
<b>B1</b>	<p>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.</p> <p>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.</p> <p>Can respond to instructions and ask questions or request clarifications in order to accomplish a shared task online.</p>
<b>A2</b>	<p>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).</p> <p>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.</p> <p>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.</p> <p>Can ask basic questions about the availability of a product or feature.</p> <p>Can respond to simple instructions and ask simple questions in order to accomplish a shared task online with the help of a supportive interlocutor.</p>
<b>A1</b>	<p>Can complete a very simple online purchase or application, providing basic personal information (e.g. name, e-mail or telephone number).</p>
<b>Pre-A1</b>	<p>Can make selections (e.g. choosing a product, size, colour) in a simple online purchase or application form, provided there is visual support.</p>

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 than 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.** 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 and one of the definitions. Make sure that the two do not match up. Tell students not to read the definitions that they have to the other students. Instead they should ask for the words for their definitions. Do not allow students to show each other the slips of paper that they have. If a student has the word that the other students is looking for, he/she give the word to the student. Continue until all of the students have found the words for their definitions. Then have each student read his/her word and definition. As a class, decide if the word and the definitions are a match. Invite a volunteer to make a sentence using the vocabulary word. Continue until all of the students have read their words and definitions. (examples of the activity Plumbing, Express Publishing, Book 1 Unit 1, Exercise 9 Writing)
- **Write the unit vocabulary on separate pieces of paper.** Give each student one of the words. Have students stand in a circle. Say a sentence to start a story. Instruct the student standing next to you to make up the next sentence in a story. Tell the student that he/she must use the word in a sentence. Continue this around the circle until each of the students has added a sentence using the work he/she has. If a student uses a word incorrectly, the student before this student will repeat what they have already said, and the student who made the mistake will try again. When all of the students have correctly used their words, you should end the study with a final sentence. (examples of the activity Plumbing, Express Publishing Book 1 **Unit 13 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 Plumbing, Express Publishing, Book 1 **Unit 5 Exercise 9 Writing, ....**)

- **Write a numbered list of vocabulary on the board.** Make sure that the words are numbered 1-12. Split students into two teams. Invite one player from each team to the front of the room. Roll a set of dice. The two players at the front of the room must draw a picture to represent the corresponding word. The first team to guess the word and correctly use it in a sentence gets a point. Repeat having different students at the board. Continue until all of the vocabulary has been reviewed. The team with most points wins. (example of the activity Plumbing, Express Publishing, Book 1 Unit 2 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 Plumbing, Express Publishing, Book 1 Unit 9 Writing)
- **Split the class into two teams.** Invite one player from each team to the front of the room. Secretly show the two players a word. Tell players that they must silently draw an image to represent the word. Their classmates must guess what the word is. The team that guesses the word correctly gets a point. The player on the team that guessed the correct word must choose a team mate to spell the word. If his/her teammate spells the word correctly, then his/her team gets another point. If his/her teammate spells the word incorrectly, then the other team gets the opportunity to spell the word and steal the point. The player who spells the word correctly must then choose someone else on his/her team to say the definition of the word. If his/her teammate gets the definition correct, then his/her team gets a point. If his/her teammate gets the definition incorrect, then the other team gets the opportunity to say the definition of the word and steal the point. The player who defines the word correctly must then choose another teammate to use the word in a sentence, If his/her teammate uses the word in a sentence correctly, then his/her team gets a point. If his/her teammate does not use the word in a sentence correctly, then the other team gets the opportunity to use the word in a sentence and steal the point. Repeat from the beginning using different words. Continue until all the vocabulary has been reviewed. The team with the most point wins. (example of the activity Plumbing, Express Publishing, Book 1 Unit 6 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 students in each team line up one behind the other. Write one list of words on the board in front of each team. The first person on each team should pick up a definition from his/her team's pile and tape it next to the correct word on the board. He/She should then run to the end of his/her line. The next student on the team should do the same. Continue until one of the teams has finished. Then check the words and definitions. If the team matches the words and definitions correctly, it is the winner. If not, continue until one of the teams matches all the words and

definitions correctly. (example of the activity Plumbing, Express Publishing, Book 1 Unit 7 Exercise 9 Writing)

- **Assign each of the students a vocabulary word.** Repeat words if you need to. Split the students into groups. Have one group of students make Circle A. The other group of students should make Circle B outside of Circle A. Make sure that the students are facing each other. Tell the students in Circle A that they must ask the students that they are facing in Circle B to define the word that they are assigned. The students in Circle B have 20 seconds to define the word. After the 20 seconds, the students in Circle B should move to the left so that they are facing a new partner. Continue until all of the students in Circles A and B have spoken to each other. Repeat, having the students in Circle B asking for the definitions and the students in Circle A moving to the left. When all of the students have spoken to each other, review the vocabulary as a class. (example of the activity Plumbing, Express Publishing, Book 1 Unit 9 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 Plumbing, Express Publishing, Book 1 Unit 8 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 Plumbing, Express Publishing, Book 1 Unit 10 Exercise 9 Writing)

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

## GLOSSARY: from Electrician, Express Publishing, 2022

Career Paths: Electrician – Glossary

### (Book 1)

**AC** [N-UNCOUNT-U11] AC, or alternating current, is a type of electric current that constantly flows back and forth in different directions. / εναλλασσόμενο ρεύμα

**add** [V-T-U9] To add numbers is to combine them. / προσθέτω

**allen wrench** [N-COUNT-U2] An allen wrench is an L-shaped piece of metal with a six-sided head used to tighten screws and bolts. / κλειδί άλλην

**ampere** [N-COUNT-U11] An ampere is a unit of measurement for electricity. / αμπέρ (μονάδα μέτρησης της έντασης του ηλεκτρικού ρεύματος)

**and** [CONJ-U9] And is used when combining or adding numbers. For example, one and one equals two. / (για την πρόσθεση) και

**arc flash blanket** [N-COUNT-U6] An arc flash blanket is a blanket electricians use to protect themselves from electrical blasts and fires. / νυρίμαχ κούβέρτα προστασίας των ηλεκτρολόγων

**arc flash dothing** [N-UNCOUNT-U6] Arc flash clothing is pants, shirts, jackets, and shoes designed to protect electricians from electric shock. / νυρίμαχος ρουχισμός προστασίας των ηλεκτρολόγων

**arc shield** [N-COUNT-U6] An arc shield is a protective plastic shield for the eyes and face that fits onto a hard hat. / μάσκα προστασίας του προσώπου

**armored cable (AC)** [N-COUNT-U13] An armored cable (AC) is a wire encased in a spiraled steel insulation with no grounding wires. / θωρακισμένο καλώδιο

**auger bit** [N-COUNT-U3] An auger bit is a bit that cuts into wood. These bits are usually from 17 to 25 centimeters long. / κοχλιωτή κεφαλή τρυπανιού

**bind** [V-T-U8] To bind is to put two things together with rope or tape. / δένω, ενώνω με σκοινί/ταινία

**block** [N-COUNT-U5] A block is a piece of stone, wood or other material that is solid with flat surfaces on each side. / κομμάτι πέτρας, ξύλου κ.λπ. με επίπεδες επιφάνειες

**brick** [N-COUNT-U5] A brick is a block of clay that is baked until it is hard and used for building. / τούβλο

**burn** [N-COUNT-U12] A burn is a painful injury to the body caused by heat. / έγκαυμα

**caliper** [N-COUNT-U10] A caliper is a small measuring device. / διαστημόμετρο (είδος διαβήτη για μέτρηση διαστημάτων)

**Celsius** [N-UNCOUNT-U10] Celsius is the metric temperature scale where water freezes at 0 degrees and boils at 100 degrees. / κλίμακα Κελσίου

**cement** [N-UNCOUNT-U5] Cement is a mixture of ground limestone and clay. / τσιμέντο

**centimeter** [N-COUNT-U10] A centimeter is a metric unit that measures length or distance, equal to ten millimeters. / εκατοστό

**circular saw** [N-COUNT-U3] A circular saw is an electric or gas-operated saw with a round blade. / δισκοπρίο

**climb** [V-T-U7] To climb is to ascend or move up towards the top of something. / σκαρφαλώνω

**code** [N-COUNT-U14] A code is a set of numbers or letters that gives information about something. / κώδικας

**come to** [V PHRASE-U9] To come to a number is to equal that number. / ισούται με

**concrete** [N-UNCOUNT-U5] Concrete is a hard material made by combining cement, small stones, sand and water. / σκυρόδεμα, μπετόν

**conductor** [N-COUNT-U13] A conductor is a wire. It is the metal part of a cable that carries electricity. / αγωγός του ηλεκτρισμού

**conduit bender** [N-COUNT-U4] A conduit bender is an instrument that twists objects made of metal. / κουρμαδόρος αγωγών

**connect** [V-T-U8] To connect is to plug in or turn on electricity or power. / συνδέω

**convert** [V-T-U10] To convert something is to change it from one state or mode into another. / μετατρέπω

**copper** [N-UNCOUNT-U5] Copper is a reddish brown metal that is often used for pipes or wires. / χαλκός

**crimper** [N-COUNT-U2] A crimper is a tool used for pushing connectors around bare wires. / πρέσα ακροδεκτών

**crimp-on connector** [N-COUNT-U15] A crimp-on connector is a type of connector that is fixed in place by using a crimping tool. / πρεσαριστό βύσμα

**current** [N-COUNT-U11] A current is the quantity of electricity that is flowing in a wire at a specific time. / ηλεκτρικό ρεύμα

**DC** [N-UNCOUNT-U11] DC, or direct current, is a type of electricity that goes in one direction, not two. / συνεχές ρεύμα

**de-energize** [V-T-U12] To de-energize is to prevent power from reaching an object, especially electrical equipment. / απενεργοποιώ, κλείνω (διακοπή παροχής ρεύματος)

**degree** [N-COUNT-U10] A degree is a unit that is used to measure temperature. / βαθμός θερμοκρασίας

**diagonal cutters** [N-PLURAL-U1] Diagonal cutters are pliers that are only used for cutting wire and do not grip. / ηλιαγοκόπτης

**diameter** [N-COUNT-U14] The diameter of a circle is an imaginary line that runs through it showing its width. / διάμετρος κύκλου

**divided by** [V PHRASE-U9] If a number is divided by a second number, you calculate how many times the second number goes into it. / (του διαιρείται) διά

**drill** [N-COUNT-U3] A drill is a machine used to make holes in different kinds of material. / τρυπάνι

**drill bit** [N-COUNT-U3] A drill bit is the sharp end of a drill used to cut into objects to make holes. / κεφαλή τρυπανιού

**drywall** [N-UNCOUNT-U5] Drywall is a board made of plaster and covered in paper that is used in building. / γυψοσανίδα

**duct tape** [N-UNCOUNT-U2] Duct tape is a kind of tape made of mesh that is used to seal air ducts. / κολλητική μονωτική ταινία

**eighth** [N-COUNT-U9] An eighth is one of eight equal parts of something. / το όγδοο

**electric shock** [N-COUNT-U6] An electric shock is a shock of electricity to the body. / ηλεκτροπληξία

**electrical hot gloves** [N-PLURAL-U6] Electrical hot gloves are gloves made of rubber that protect electricians from electric shock. / ραστικήνια γάντια προστασίας των ηλεκτρολόγων



*Career Paths: Electrician – Glossary*

<p><b>electrical tape</b> [N-UNCOUNT-U2] Electrical tape is a kind of tape made of plastic or vinyl that is used to insulate electrical wires. / μονωτική ταινία</p> <p><b>electrocution</b> [N-UNCOUNT-U12] Electrocution is death or injury caused by electricity running through the body. / θανατηφόρος ηλεκτροπληξία</p> <p><b>electron</b> [N-COUNT-U11] An electron is a small part of an atom that contains a negative charge. / εκτυπωμένο ανάγλυφο</p> <p><b>embossed</b> [ADJ-U14] If an object is embossed, it has a pattern, number or design engraved on it. / εκτυπωμένο ανάγλυφο</p> <p><b>end cutting pliers</b> [N-PLURAL-U1] End cutting pliers are pliers used for pulling out staples etc. / εμπροσθοκόπτης, τσιμπίδα αφαίρεσης ελασμάτων</p> <p><b>equals</b> [V-T-U9] If the answer to a mathematical problem equals a number, it is that number. / ισούται με, ίσων</p> <p><b>Fahrenheit</b> [N-UNCOUNT-U10] Fahrenheit is the non-metric temperature scale where water freezes at 32 degrees and water boils at 212 degrees. / κλίμακα Φαρενάιτ</p> <p><b>fish tape</b> [N-COUNT-U4] A fish tape is a long, metal instrument that electricians use to put electrical wires in walls. / ατσάλινα (για τοποθέτηση καλωδίων σε κανάλια τοίχων)</p> <p><b>flashlight</b> [N-COUNT-U1] A flashlight is a small, battery operated light that can be carried around. / φακός</p> <p><b>foot</b> [N-COUNT-U10] A foot is a unit of length that equals 12 inches. / πόδι (μονάδα μέτρησης μήκους, 1 πόδι = 0,3048 μέτρα)</p> <p><b>gauge</b> [N-COUNT-U14] A gauge is a device which calculates and shows the amount or degree of what is inside an object, such as a gas tank or wire. / μετρητής, όργανο μέτρησης</p> <p><b>grab</b> [V-T-U7] To grab something is to take hold of it suddenly. / αρπάζω, πιάνω</p> <p><b>grounding connector</b> [N-COUNT-U15] A grounding connector is for making ground connections. It is used for splicing wires that need to be grounded. / βύσμα γείωσης</p> <p><b>hacksaw</b> [N-COUNT-U2] A hacksaw is a saw with a thin blade used to cut through metal. / σιδερονότιο</p> <p><b>hammer</b> [N-COUNT-U2] A hammer is a tool with a metal top used for hitting nails or other objects. / σφυρί</p> <p><b>hammer drill</b> [N-COUNT-U4] A hammer drill is a machine which hits a hard substance (like cement) repeatedly to break it apart. / κρουστικό δρέπανο, σφυροτρίπανο</p> <p><b>hard hat</b> [N-COUNT-U6] A hard hat is a protective hat made of strong plastic. / προστατευτικό κράνος</p> <p><b>hazard</b> [N-COUNT-U12] A hazard is a known danger. / κίνδυνος</p> <p><b>hole saw bit</b> [N-COUNT-U3] A hole saw bit is a metal tube-shaped drill bit with sharp edges used to cut rings into objects. / κεραμή ποτηροτρίπανου τοίχου</p> <p><b>hot stick</b> [N-COUNT-U6] A hot stick is a fiberglass rod that electricians use to protect themselves from shocks when they are working with wires. / ράβδος γείωσης</p> <p><b>hundred</b> [N-COUNT-U9] A hundred is combined with another number to express numbers in the thousands. For example, the number 2,300 could be stated twenty-three hundred. / η εκατοντάδα</p>	<p><b>imperial</b> [ADJ-U10] If something is imperial, it involves the system of measurement based on the inch and the pound. / (για σύστημα μέτρησης) βρετανικό (με ίντσες [για μήκος] και λίβρες [για βάρος])</p> <p><b>inch</b> [N-COUNT-U10] An inch is an imperial unit that measures length or distance. / ίντσα (μονάδα μέτρησης μήκους, 1 ίντσα = 2,54 εκατοστά)</p> <p><b>inspect</b> [V-T-U8] To inspect is to look at or analyze something carefully. / ελέγχω, επιθεωρώ</p> <p><b>install</b> [V-T-U8] To install is to arrange, connect or put something in a certain place so you can use it. / εγκαθιστώ</p> <p><b>insulated</b> [ADJ-U13] If a wire is insulated, then it is protected from touching other wires. This helps prevent fires and short circuiting. / μονωμένος</p> <p><b>insulation</b> [N-COUNT-U8] Insulation is a material used to prevent the conduction of heat or of electricity. / μονωτικό υλικό</p> <p><b>is</b> [V-U9] If something is something else, they are equal. / ισούται με, ίσων</p> <p><b>jacket</b> [N-COUNT-U13] A jacket is the insulated sheath that protects the wires from touching each other or getting too hot. / μονωτική επένδυση καλωδίου</p> <p><b>jigsaw</b> [N-COUNT-U3] A jigsaw is an electric or gas-operated saw with a thin blade, which cuts straight and rounded edges into objects. / ηλεκτρικό πριόνι</p> <p><b>kneel</b> [V-I-U7] To kneel is to support oneself on one or both knees. / γονατίζω</p> <p><b>knob and tube (K&amp;T) wiring</b> [N-UNCOUNT-U13] Knob and tube (K&amp;T) wiring is wires encased in porcelain knobs and tubes. It is usually found in older homes. / καλωδίωση παλαιού τύπου (με σωλήνες μόνωσης από πορσελάνη)</p> <p><b>labeling machine</b> [N-COUNT-U4] A labeling machine is an instrument electricians use to make labels for different objects. / ετικετόζα</p> <p><b>leather gloves</b> [N-PLURAL-U6] Leather gloves are gloves that are made of leather and used to protect the hands. / δερμάτινα γάντια</p> <p><b>less</b> [PREP-U9] Less is used when taking a number away from another. / μείον, μίλην</p> <p><b>level</b> [N-COUNT-U4] A level is a tool electricians use to ensure they install things in a straight line. / αλφάδι</p> <p><b>lift</b> [V-T-U7] To lift something is to move it to a higher position. / σηκώνω</p> <p><b>lineman's pliers</b> [N-PLURAL-U4] Lineman's pliers are tools workers use to twist and slice wires. / πένσα με κόφτη καλωδίων</p> <p><b>live wire</b> [N-COUNT-U12] A live wire is a wire with electrical energy running through it. / ηλεκτροφόρο καλώδιο</p> <p><b>location</b> [N-COUNT-U14] A location is a place or site. / τοποθεσία</p> <p><b>lockout/tagout procedure</b> [N-COUNT-U12] A lockout/tagout procedure is when a lock is placed on a power source after it has been turned off and a label is placed on the equipment to show that it has been locked. / διαδικασία κλειδώματος και σήμανσης ηλεκτρικού εξοπλισμού</p> <p><b>long nose (needle nose) pliers</b> [N-PLURAL-U1] Long nose pliers are pliers with long blades able to grip or cut through wires. / μυτοσίμνιδο</p>
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<p><b>masonry drill bit</b> [N-COUNT-U4] A masonry drill bit is a bit that is made to drill through hard surfaces like stone or concrete. It is usually used with a hammer drill. / κεφαλή τρυπανιού λιθοδομής (βαρέος τύπου)</p> <p><b>maximum</b> [ADJ-U14] Maximum is the most of something that is achievable. / ο μέγιστος, ο μεγαλύτερος</p> <p><b>measuring tape</b> [N-COUNT-U1] A measuring tape is a tool with a long piece of thin metal, paper or plastic with numbers on it. / μεζούρα</p> <p><b>metal-clad (MC) cable</b> [N-UNCOUNT-U13] Metal-clad (MC) cable is wires encased in steel insulation, and it has a green ground wire inside the metal jacket. / καλώδιο με μεταλλική μόνωση</p> <p><b>meter</b> [N-COUNT-U10] A meter is a unit of length that measures 100 centimeters or 39 inches. / μέτρο (η βασική μονάδα μέτρησης του μήκους)</p> <p><b>metric</b> [ADJ-U10] If something is metric, it involves the system of measurement based on the meter and the kilogram. / (για σύστημα μέτρησης) μετρικό (με μέτρα [για μήκος] και κιλά [για βάρος])</p> <p><b>micrometer</b> [N-COUNT-U10] A micrometer is a type of caliper with a calibrated screw used to measure small distances. / μικρόμετρο (όργανο για την ακριβή μέτρηση πολύ μικρών αποστάσεων)</p> <p><b>millimeter</b> [N-COUNT-U10] A millimeter is a metric unit that measures length or distance, equal to 1/10 of a centimeter. / χιλιοστό</p> <p><b>minus</b> [PREP-U9] Minus is used when taking away a number from another. / μείον, μίνο</p> <p><b>mortar</b> [N-UNCOUNT-U5] Mortar is a mixture of sand, water and lime used to hold bricks or stones in place. / ασβεστοκονίαμα</p> <p><b>multimeter</b> [N-COUNT-U4] A multimeter is a device used to determine a wire's amount of voltage and power. / πολύμετρο (συσκευή μέτρησης της έντασης και της τάσης του ρεύματος)</p> <p><b>multiplied by</b> [V PHRASE-U9] If a number is multiplied by another, it is added onto itself that number of times. / (του πολλαπλασιάζεται) επί</p> <p><b>nonmetallic (NM) sheath cable</b> [N-UNCOUNT-U13] Nonmetallic (NM) sheath cable is wires in a non-metal jacket. The jacket is made of a material like thermoplastic. / καλώδιο χωρίς μεταλλική μόνωση</p> <p><b>nut driver</b> [N-COUNT-U2] A nut driver is a tool used for tightening nuts. / καρυδοκατσάβιδο</p> <p><b>ohm</b> [N-COUNT-U11] An ohm is a unit of measurement showing electrical resistance. / ομ (μονάδα μέτρησης της ηλεκτρικής αντίστασης)</p> <p><b>ought</b> [N-UNCOUNT-U14] Ought is nothing or nil. / μηδέν</p> <p><b>over</b> [PREP-U9] If one number is over another number, it is divided by that number. / (για τη διαίρεση) διά</p> <p><b>paralyze</b> [V-T-U12] To paralyze is to freeze the muscles so they cannot move. / προκαλώ παράλυση</p> <p><b>Phillips screwdriver</b> [N-COUNT-U2] A Phillips screwdriver is a tool used to tighten screws that have a cross-shaped head. / σταυροκατσάβιδο</p> <p><b>plaster</b> [N-UNCOUNT-U5] Plaster is a mixture of lime, sand and water used in buildings to cover walls and ceilings. / γύψος, σοβάς</p>	<p><b>plug-in analyzer</b> [N-COUNT-U4] A plug-in analyzer is a machine used to check circuits to make sure they are correctly installed and safe. / όργανο για τον έλεγχο κυκλωμάτων</p> <p><b>plus</b> [PREP-U9] Plus is used when adding numbers. / (για την πρόσθεση) συν</p> <p><b>plywood</b> [N-UNCOUNT-U5] Plywood is a board made of thin layers of wood that are glued together. / κοντραπλακέ</p> <p><b>pull</b> [V-T-U8] To pull is to put force on an object in order to move it closer to you. / τραβώ</p> <p><b>push</b> [V-T-U8] To push is to put force on an object in order to move it away from you. / πιέζω, σπρώχνω</p> <p><b>push-in connector</b> [N-COUNT-U15] Instead of twisting, wires are pushed in through holes in the push-in connector. / ηλεκτρολογική κλήμμα, σωληνωτός σύνδεσμος καλωδίων</p> <p><b>rating</b> [N-COUNT-U14] A rating is a list grading and comparing objects on their worth, usefulness or value. / αριθμηση, διαβάθμιση κλίμακας</p> <p><b>reciprocating saw</b> [N-COUNT-U3] A reciprocating saw is an electric or gas-operated saw that has a few different blades which can be switched. / παλινδρομικό πριόνι</p> <p><b>release</b> [V-T-U7] To release something is to let it free or let it go. / απελευθερώνω, αφήνω</p> <p><b>replace</b> [V-T-U13] To replace is to take away an old wire and put a new wire in its place. / αντικαθιστώ</p> <p><b>resistance</b> [N-UNCOUNT-U11] Electrical resistance is the way certain substances work against electricity. / αντίσταση</p> <p><b>resistant</b> [ADJ-U14] If an object is resistant, it is not affected by certain things such as heat or water. / ανθεκτικός (σε κάτι)</p> <p><b>risk</b> [N-COUNT-U12] A risk is a chance that something bad will happen. / κίνδυνος</p> <p><b>rotary drill</b> [N-COUNT-U5] A rotary drill is a drill that moves in circles to cut something. / περιστροφικό δράπανο</p> <p><b>rotary hammer</b> [N-COUNT-U5] A rotary hammer hits things hard, while turning, to drill into something. / περιστροφικό σφυρί</p> <p><b>round off</b> [V PHRASE-U10] To round off a screw or bolt is to damage it so that it cannot be moved properly with normal tools. / χαλάω μια βίδα, ένα μπουλόνι κ.λπ.</p> <p><b>rubber mat</b> [N-COUNT-U6] A rubber mat is a mat made of rubber that electricians stand on to protect themselves from electric shock. / ησαστινένιο χαλάκι</p> <p><b>safety glasses</b> [N-UNCOUNT-U6] Safety glasses are clear glasses made of thick plastic that protect electricians' eyes from flashes and dangerous materials. / προστατευτικά γυαλιά</p> <p><b>screwdriver</b> [N-COUNT-U1] A screwdriver is a tool used to tighten or loosen screws. / κατσαβίδι</p> <p><b>service entrance (SE) cable</b> [N-COUNT-U13] A service entrance (SE) cable is used for wiring outside and above ground. / καλώδιο για επιφανειακή και εναέρια χρήση</p> <p><b>sheath</b> [N-COUNT-U14] A sheath is a plastic casing that protects wires. / περιβλήμα, κάλυμμα</p> <p><b>shell</b> [N-COUNT-U15] A shell is a covering used on connectors to protect wires. It is usually made of fire resistant thermoplastic. / κέλυφος, σκληρό περιβλήμα</p>
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**shock** [V-T-U12] To shock is to pass electricity through the body. / προκαλώ ηλεκτροσόκ

**side cutters** [N-PLURAL-U1] Side cutters are a type of pliers used for cutting, twisting or pulling wires. / ηλιαγοκόπτης, κοφτάκι

**socket wrench** [N-COUNT-U2] A socket wrench is a tool used to tighten bolts. / σωληνωτό κλειδί (για να βιδώνει μπουλόνια)

**spade bit** [N-COUNT-U3] A spade bit is a narrow bit with a sharp tip and edges. / κεφαλή ρουμπούριανου

**splice** [V-T-U8] To splice is to join two wires by twisting them and connecting the ends. / συνενώνω καλώδια

**split** [V-T-U7] To split something is to separate it or divide it into more than two parts. / διαχωρίζω, ανοίγω κατά μήκος

**spring** [N-COUNT-U15] A spring is a device inside the shell of a connector. The spring creates pressure which tightly splices the wires together. / ελατήριο

**stand** [V-T-U7] To stand is to be in a vertical position. / στέκομαι όρθιος

**static electricity** [N-UNCOUNT-U12] Static electricity is an electrical charge made by friction. / στατικός ηλεκτρισμός

**steel** [N-UNCOUNT-U5] Steel is a metal that is made from combining iron and carbon. / ασάμι, χάλυβας

**steel toe boots** [N-PLURAL-U6] Steel toe boots are boots with a layer of steel in the front so that workers' feet won't be hurt by objects that fall. / μπότες με ασάμινη άκρη για την προστασία των δακτύλων των ποδιών

**stepped drill bit** [N-COUNT-U4] A stepped drill bit is a drill bit that is used to drill through metal, plastic or wood. / κεφαλή τρυπανιού για μέταλλο και πλαστικό (με διαβαθμίσεις στη διάμετρό του)

**stone** [N-UNCOUNT-U5] Stone is the hard substance rocks are made from, and is often used in buildings. / πέτρα

**stoop** [V-I-U7] To stoop is to stand with the top half of the body bent forward. / σκύβω

**strip** [V-T-U8] To strip is to take the plastic covering off wires so that only the metal is left. / απογυμνώνω (καλώδιο απ' το πλαστικό του κάλυμμα)

**stud punch** [N-COUNT-U4] A stud punch is a device that cuts holes for wires to go through. / διακορευτής μεταλλικών προφίλ

**subtract** [V-T-U9] To subtract a number is to take it away from another number. / αφαιρώ

**test** [V-T-U8] To test is to turn something on or try something to see if it works. / ελέγχω, δοκιμάζω

**thermoplastic** [ADJ-U15] Thermoplastic describes the fire resistant material that is used to make connector shells. / θερμοπλαστικός

**times** [PREP-U9] Times is used when multiplying numbers. / (για τον πολλαπλασιασμό) επί

**tool belt** [N-COUNT-U2] A tool belt is a belt with loops for carrying tools while working on a job. / ζώνη εργαλείων

**tool kit** [N-COUNT-U1] A tool kit is a bag or box used to hold a set of tools. / σετ εργαλείων (μέσα σε εργαλειοθήκη)

**torque wrench** [N-COUNT-U2] A torque wrench is a tool that can be adjusted to create different amounts of force when turning a bolt. / δυναμόκλειδο (για να βιδώνει μπουλόνια)

**turn off** [V PHRASE-T-U7] To turn something off is to make it cease operating or stop working. / σβήνω, ανεργοποιώ

**turn on** [V PHRASE-T-U7] To turn something on is to make it operate or start working. / ανάβω, ενεργοποιώ

**twist** [V-T-U8] To twist something is to turn it or bend it. / στρίβω, γυρίζω

**twist bit** [N-COUNT-U3] A twist bit is a drill bit with a spiral or coil-shaped cutting part. / ελικοειδής κεφαλή τρυπανιού

**twist-on connector** [N-COUNT-U15] A twist-on connector is a wire connector that is twisted on. It connects or splices one or more wires. / βύσμα συστροφής

**underground connector** [N-COUNT-U15] When a connection may be exposed to water, moisture, and the elements, or buried underground, an underground connector is used. / υπόγειος συνδετήρας καλωδίων

**underground feeder (UF) cable** [N-COUNT-U13] An underground feeder (UF) cable is used outdoors and can be buried directly underground. It can be used in wet areas. / καλώδιο για υπόγεια χρήση

**utility knife** [N-COUNT-U1] A utility knife is a tool with a thin, sharp slanted blade used to cut things. / κονίδι

**volt** [N-COUNT-U11] A volt measures the strength of the force moving electricity. / βολτ (μονάδα μέτρησης της τάσης του ηλεκτρικού ρεύματος)

**voltage** [N-UNCOUNT-U11] Voltage is the force of moving electricity. / η τάση του ηλεκτρισμού

**waterproof connector** [N-COUNT-U15] A waterproof connector is designed to protect wires from water. / αδιάβροχος συνδετήρας καλωδίων

**watt** [N-COUNT-U11] A watt is a unit of measurement for electrical power. / βατ (μονάδα μέτρησης της ισχύος του ηλεκτρικού ρεύματος)

**winged connector** [N-COUNT-U15] A winged connector is a twist-on connector with extra plastic wings. This makes it easier to tighten. / φτερωτό βύσμα

**wire strippers** [N-PLURAL-U1] A wire stripper is a tool used for pulling the covering off wires. / απογυμνωτής καλωδίων

**wood** [N-UNCOUNT-U5] Wood is a substance that comes from trees and is used for building. / ξύλο

**wood auger** [N-COUNT-U3] A wood auger is a big drill bit which smooths the rough parts of holes in wood. / ελικοειδής κεφαλή τρυπανιού (για να θραύει τις τρύπες που ανοίγονται σε ξύλο)

**yard** [N-COUNT-U10] A yard is a unit of length that equals 3 feet. / γιάρδα (μονάδα μέτρησης μήκους, 1 γιάρδα = 0,9144 μέτρα)

**(Book 2)**

**accommodate** [V-T-U4] If something can accommodate something else, it has enough capacity. / έχω χωρητικότητα για κάτι

**adapter** [N-COUNT-U15] An adapter is a device that allows devices with different types of connectors to be linked together. / αντάπτορας, προσαρμογέας

**aerial service** [N-COUNT-U3] An aerial service refers to a service entrance that is installed outside a building. / εναέρια παροχή ρεύματος



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- amperage** [N-UNCOUNT-U7] Amperage is the measurement of electrical current, expressed in amperes or amps. / η ένταση του ηλεκτρικού ρεύματος
- analyze** [V-T-U7] To analyze something is to carefully examine the nature of something. / αναλύω
- appliance** [N-COUNT-U7] An appliance is an electric machine that is used for a particular household purpose. / οικιακή συσκευή
- balance** [V-T-U7] To balance something is to make each side of something equal. / εξισορροπώ
- baseboard** [N-COUNT-U15] A baseboard covers the gap between the wall and the floor. / σοβατενί
- blade connector** [N-COUNT-U1] A blade connector is a single wire connection in which a blade is inserted into the blade's holder. / σύνδεσμος με πεπιλατωμένη μεταλλική κεφαλή
- blown fuse** [N-COUNT-U6] A blown fuse is a fuse in which the metal strip has melted to stop the flow of electricity. A blown fuse cannot be reused and must be replaced to restore the current. / καμένη ασφάλεια
- bond** [V-T-U5] To bond something is to fasten two or more parts together. / συνδέω, ενώνω
- bonding wire** [N-COUNT-U13] A bonding wire is a wire connected to the ground system. It is used to help form an electrically conductive path that allows an electrical current to flow uninterrupted. / καλώδιο σύνδεσης
- box extender** [N-COUNT-U10] A box extender is a part that fits around a switch if the switch is not flush with the wall. / περιμετρικό καπάκι διακόπτη/μπρίζας
- bracket** [N-COUNT-U10] A bracket is an attachment that is used to secure something to a wall. / γωνιακό στήριγμα για ράφια
- branch circuit** [N-COUNT-U4] A branch circuit is a part of an electrical system that carries electricity from the main service panel to a particular area or fixture. / παρακλάδι κυκλώματος
- breaker box** [N-COUNT-U14] A breaker box is an electrical box that distributes electricity through a house or building after passing through protective circuit breakers within the box. / κεντρικός πίνακας ασφαλειών
- building code** [N-COUNT-U2] A building code is a set of rules used for the structural safety of buildings. / κανονισμός δόμησης
- buried service** [N-COUNT-U3] A buried service refers to a service entrance that is installed underground. / υπόγεια παροχή ρεύματος
- capacity** [N-UNCOUNT-U4] Capacity is the maximum amount of electricity that can flow through an appliance. / χωρητικότητα (ποσότητα ηλεκτρισμού που αντέχει μια συσκευή)
- cartridge fuse** [N-COUNT-U6] A cartridge fuse is a fuse encased in a cylinder with metal caps on each end. / ασφάλεια μέσα σε προστατευτική θήκη
- cheater plug** [N-COUNT-U9] A cheater plug is an adapter that connects a plug with a grounding pin to an outlet without a grounding slot. / αντίπαρας, προσαρμογέας
- circuit breaker** [N-COUNT-U6] A circuit breaker is a switch that is tripped to stop electrical flow when it detects an excessive current. / ρελέ ασφαλείας
- clamp** [N-COUNT-U12] A clamp is a tool used to grasp two wires in order to conduct electricity through them. / συνδετήρας καλωδίων
- clamp connector** [N-COUNT-U1] A clamp connector uses a V-shaped ring to attach a connector to a cable. / συνδετήρας χειρός
- clearance** [N-UNCOUNT-U3] Clearance is the required distance that must be maintained between a building and a utility. / απόσταση ασφαλείας
- combustible** [N-COUNT-U14] A combustible is an object that can catch on fire easily. / εύφλεκτη ύλη
- commercial grade switch** [N-COUNT-U11] A commercial grade switch is a heavy duty switch. It is used in large buildings and is higher in price. / ρελέ ασφαλείας για μεγάλα ηλεκτρικά φορτία
- component** [N-COUNT-U5] A component is a small part of an electrical appliance. / εξάρτημα
- conduit** [N-COUNT-U2] A conduit is a tube put around electrical wiring for protection and routing. / σωλήνας με ηλεκτρικούς αγωγούς
- connector** [N-COUNT-U1] A connector is something that links two pieces of electrical equipment. / συνδετήρας
- consumption** [N-UNCOUNT-U7] Consumption is the amount of something used. / κατανάλωση (ηλεκτρικού ρεύματος)
- continuous** [ADJ-U5] If something is continuous, it exists without stopping or being broken. / συνεχής
- control** [V-T-U10] To control something is to have power over the action or occurrence of something. / χειρίζομαι διακόπτη
- corresponding** [ADJ-U7] If something is corresponding, it is related to or connected to something else. / ανάλογος, αντίστοιχος
- coverplate** [N-COUNT-U10] A coverplate is a flat piece that fits around a switch to cover the wall cavity and switch box. / περιμετρικό κάλυμμα μπρίζας
- cut off** [V PHRASE-T-U4] To cut off something is to stop or take away something abruptly. / διακόπτω, αποσυνδέω
- cut-in box** [N-COUNT-U8] A cut-in box is a receptacle box that is used in a wall that has already been built. / χώρος για διακόπτη μέσα στον τοίχο
- deep** [ADJ-U8] Deep describes the space of something from the front of it to the back of it. / βαθύς
- dimmer switch** [N-COUNT-U11] A dimmer switch allows for more control over a light setting. It changes the brightness of a light instead of simply turning it off or on. / ροοστάτης (συσκευή που ρυθμίζει την ένταση του ηλεκτρικού ρεύματος)
- ditch** [N-COUNT-U13] A ditch is a narrow trench that is made in the ground through digging. / χαντάκι
- double pole breaker** [N-COUNT-U6] A double pole breaker is a circuit breaker that is connected to two hot bus bars and supplies 240-volt power to a circuit. / διακόπτης διηλής ασφαλείας
- double pole switch** [N-COUNT-U11] A double pole switch is used to turn two independent circuits on or off at the same time. / διπολικός διακόπτης
- draw** [V-T-U7] To draw something is to bring something towards something else. / τραβώ (ρεύμα)

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**drip loop** [N-COUNT-U3] A drip loop is a loop formed by incoming electrical wires that connect to a customer's building. / κουλούρα που σχηματίζει το καλώδιο για αποφυγή υγρασίας

**drive** [V-I-U13] To drive is to cause movement through some sort of force. / προωθούμαι, κινούμαι

**duplex outlet** [N-COUNT-U9] A duplex outlet is an outlet that can receive two plug receptacles. / διητή μπριζά

**earth grounding system** [N-COUNT-U12] An earth grounding system is an electrical system that measures the electrical capability of conductors against the electrical capability of the ground. / σύστημα γείωσης

**electrical fire** [N-COUNT-U14] An electrical fire is a fire that starts from an electrical source. / πυρκαγιά από ηλεκτρικό ρεύμα

**electrical load** [N-COUNT-U7] An electrical load is the total amount of power, or amperage, being drawn by an electrical panel. / ηλεκτρικό φορτίο

**electrical metallic tubing** [N-UNCOUNT-U2] Electrical metallic tubing is a type of conduit tubing made of coated steel or aluminum. / μεταλλικές σωληνώσεις με ηλεκτρικούς αγωγούς

**equipment grounding conductor** [N-COUNT-U12] An equipment grounding conductor is a conductor joining a piece of metal that does not conduct electricity to a grounding electrode conductor. / αγωγός γείωσης

**estimate** [N-COUNT-U12] An estimate is a statement that tells someone how much money will be charged for someone else to do a certain amount of work. / υπολογισμός κόστους

**evaluate** [V-T-U14] To evaluate is to assess the state, usefulness or value of something. / αξιολογώ

**fail** [V-I-U15] To fail is for a device to not operate or not operate properly. / παθαίνω βλάβη, χαλώ

**fault current** [N-COUNT-U12] A fault current is an electrical current that is irregular in any way. For example, it may become disrupted at one point. / διαρροή ρεύματος

**faulty** [ADJ-U14] If an object or machine is faulty, it is not working properly. / ελαττωματικός

**feeder cable** [N-COUNT-U5] A feeder cable is a wire that delivers electricity to a panel. / καλώδιο τροφοδοσίας

**fixed wiring** [N-UNCOUNT-U14] Fixed wiring is wiring that is fastened or connected to a wall or another object so that it will not move. / σταθερή καλωδίωση

**flammable** [ADJ-U15] If something is flammable, it will burst into flames when it gets very hot. / εύφλεκτος

**flexible** [ADJ-U2] If a conduit is flexible, it can be bent in different directions. / εύκαμτος

**flicker** [V-I-U14] To flicker is to shine in a shaky way, or to change in brilliance. / τρεμοσβήνω

**flush** [ADJ-U10] If something is flush, its surface is level with the surface of something else. / αλληλαδιασμένος, στο ίδιο επίπεδο

**footer** [N-COUNT-U13] A footer is connected to the grounding system using rebar. It is a low-resistance ground. / αγωγός γείωσης

**four gang box** [N-COUNT-U10] A four gang box is an electrical box installed in a wall that delivers power to four switches. / πλαίσιο με τέσσερις διακόπτες

**four-way switch** [N-COUNT-U11] A four-way switch allows a circuit to be controlled at three or more different locations. / διακόπτης τριών οδών

**frayed** [ADJ-U14] If an object is frayed, the end or edge of it is tattered or damaged so that the inside of the object is uncovered. / φθαρμένος

**function** [N-COUNT-U4] A function is a purpose or intended use for something. / λειτουργία

**fuse** [N-COUNT-U6] A fuse is a device with a small metal strip that melts and stops electrical flow when an excessive current passes through it. / ασφάλεια

**gadget** [N-COUNT-U4] A gadget is a small electronic or electrical device. / συσκευή

**ground** [V-T-U12] To ground is to link a circuit to the earth. / γειώνω

**ground fault** [N-COUNT-U12] A ground fault is the flow of electricity in a ground line because the electrical system has been damaged by a thunderstorm or something else. / πρόβλημα στη γείωση

**ground fault** [N-COUNT-U6] A ground fault is an electrical malfunction in which a current gets into a ground conductor and often causes a short circuit. / πρόβλημα στη γείωση

**ground rod** [N-COUNT-U12] A ground rod is a pole that is put in the earth so that electricity will flow there. / ράβδος γείωσης

**ground wire** [N-COUNT-U13] A ground wire is grounded and completes a circuit if a neutral wire fails. / καλώδιο γείωσης

**grounded** [ADJ-U2] If a conduit is grounded, it is connected with the ground. / γειωμένος

**grounding conductor** [N-COUNT-U5] A grounding conductor is a wire that keeps an electrical current stable by maintaining an electrical connection with the earth. / αγωγός γείωσης

**grounding electrode conductor** [N-COUNT-U12] A grounding electrode conductor joins part of a system of electricity to other conductors, or electrodes. / αγωγός με ηλεκτρόδιο γείωσης

**grounding pin** [N-COUNT-U9] A grounding pin is a prong on some plugs that prevents electrical surges by maintaining a connection with the earth through a neutral wire. / ακροδέκτης γείωσης

**grounding screw** [N-COUNT-U10] A grounding screw is a metal piece that grounds a metal coverplate. / βίδα γείωσης

**grounding slot** [N-COUNT-U9] A grounding slot is a receptacle on some outlets that receives the grounding pin. / υποδοχή γείωσης

**handy box** [N-COUNT-U8] A handy box is a metal box that is sometimes used as a substitute receptacle box. / κουτάκι αντί για πρίζα ασφαλειών

**hook up** [V PHRASE-U9] To hook up something is to install it. / συνδέω, εγκαθιστώ

**hot bus** [N-COUNT-U4] A hot bus is the part of an electrical system that receives electricity from an electrical meter and delivers it to the service panel. / καλώδιο διανομής ηλεκτρικού ρεύματος

**hot conductor** [N-COUNT-U5] A hot conductor is a wire that carries electricity to a fixture or appliance. / ενεργός αγωγός ρεύματος

**ignite** [V-T-U14] To ignite something is to set it on fire. / βάζω φωτιά



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<p><b>immediate turn plug</b> [N-COUNT-U9] An immediate turn plug is a plug with an electrical cord that lies against a wall instead of sticking straight out from the wall. It should be plugged in so that the cord hangs. / ρευματολήτης (φίς) με σταθερή ποιτικότητα</p> <p><b>installation</b> [N-COUNT-U2] An installation is the act of fitting an electrical appliance for use. / εγκατάσταση</p> <p><b>insulation displacement connector</b> [N-COUNT-U1] An insulation displacement connector allows for a wire to not be stripped before connecting. / συνδετήρας που προφυλάσσει τα καλώδια απ' την απογύμνωση</p> <p><b>integral nail box</b> [N-COUNT-U8] An integral nail box is a lower-priced receptacle box that already has nail holes drilled into it. / κουτάκι με ενσωματωμένα καρφιά στήριξης</p> <p><b>keyed switch</b> [N-COUNT-U11] A keyed switch is an on/off switch that is controlled with a removable key. / διακόπτης με κλειδί</p> <p><b>main service panel</b> [N-COUNT-U4] A main service panel is the part of an electrical system that controls the distribution of power to a particular house or building. / κεντρικός πίνακας ασφαλειών</p> <p><b>main switch</b> [N-COUNT-U4] A main switch is the part of a service panel that can cut off electricity to an entire house or building. / γενικός διακόπτης</p> <p><b>maintenance</b> [N-UNCOUNT-U14] Maintenance is the care and protecting of an object in order to keep it working in good condition. / συντήρηση</p> <p><b>malfunction</b> [N-COUNT-U5] A malfunction is when an electrical appliance does not work properly. / δυσλειτουργία</p> <p><b>manually</b> [ADV-U4] If something is done manually, it is controlled by a person directly. / χειροκίνητα</p> <p><b>moisture tight fitting</b> [N-COUNT-U2] A moisture tight fitting is a conduit made specifically to keep water out. / υδατοστεγής αγωγός καλωδίων</p> <p><b>mount</b> [V-T-U8] To mount an object is to attach it to another object. / εγκαθιστώ και στερεώνω</p> <p><b>narrow slot</b> [N-COUNT-U9] A narrow slot is the smaller of the two rectangular slots in an electrical outlet. It connects to the prong that delivers a hot electrical current to the plug. / στενή υποδοχή μπριζας</p> <p><b>neutral bus</b> [N-COUNT-U4] A neutral bus is the part of an electrical system that carries a current back to the service panel after the power has been spent. / ουδέτερος αγωγός</p> <p><b>neutral return conductor</b> [N-COUNT-U5] A neutral return conductor is a wire that carries spent electrical current back to the electrical panel or subpanel. / ουδέτερος αγωγός επιστροφής</p> <p><b>non-corrosive</b> [ADJ-U2] If a conduit is non-corrosive, it cannot be damaged by chemicals. / που δε διαβρώνεται</p> <p><b>non-metallic tubing</b> [N-UNCOUNT-U2] Non-metallic tubing is a type of conduit tubing made of plastic. / μη μεταλλικές σωληνώσεις</p> <p><b>offset connector</b> [N-COUNT-U1] An offset connector is used to change the direction of a wire entering an electrical box. / λοξός σύνδεσμος</p> <p><b>open circuit</b> [N-COUNT-U11] An open circuit is one with a missing connection (meaning no current flows). / ανοιχτό κύκλωμα</p>	<p><b>outlet</b> [N-COUNT-U9] An outlet is a device installed in a wall that carries electricity to devices that are plugged into it. / μπριζα</p> <p><b>outlet box</b> [N-COUNT-U8] An outlet box is a container that holds the plug-in for electrical connections. / εξωτερική μπριζα σε κουτάκι</p> <p><b>outlet cap</b> [N-COUNT-U9] An outlet cap is a plastic cover that prevents unwanted materials from entering the openings of an unused outlet. / κάλυμμα μπριζας</p> <p><b>overcrowded</b> [ADJ-U8] If something is overcrowded, it contains too many people or objects. / υπερπλήρης</p> <p><b>overcurrent</b> [N-UNCOUNT-U4] Overcurrent is a surge of power that occurs when an electrical current exceeds a circuit's amperage capacity. / υπέρβαση ποσότητας ηλεκτρικού ρεύματος που αντέχει ένα κύκλωμα</p> <p><b>overheat</b> [V-I-U14] If something overheats it, becomes too hot. / υπερθερμαίνωμαι</p> <p><b>overload</b> [N-COUNT-U6] Overload occurs when an electrical current is too high for a particular electrical system. / υπερφόρτιση</p> <p><b>owner's manual</b> [N-COUNT-U7] An owner's manual is a booklet that provides manufacturer details and instructions for using a particular product. / εγχειρίδιο με οδηγίες χρήσης</p> <p><b>pancake box</b> [N-COUNT-U8] A pancake box is a thin, round receptacle box. / στρογγυλό κουτάκι ασφαλειών</p> <p><b>panel bond</b> [N-COUNT-U13] A panel bond is a wire that connects the panel to the grounding system. / καλώδιο γείωσης του πίνακα ασφαλειών</p> <p><b>parallel</b> [ADJ-U13] If two things are parallel, they run in the same direction but do not cross paths. / παράλληλος</p> <p><b>parity</b> [N-UNCOUNT-U7] Parity is the condition of being equal or balanced. / ισότητα, αναλογία</p> <p><b>permanent</b> [ADJ-U15] If something is permanent, it is meant to stay in place and work over a long period of time. / μόνιμος</p> <p><b>pilot light switch</b> [N-COUNT-U11] A pilot light switch has a small light built in. The light indicates that the switch is turned on. / διακόπτης με φωτεινή ένδειξη</p> <p><b>plug</b> [N-COUNT-U9] A plug is a part with two or more prongs that connects an electrical cord to an outlet. / ρευματολήτης, το φίς</p> <p><b>plug and socket connector</b> [N-COUNT-U1] A plug and socket connector has one plug with prongs that is inserted into the openings of a receptor plug. / μπριζα για υποδοχή του φίς</p> <p><b>plug fuse</b> [N-COUNT-U6] A plug fuse is a fuse with a threaded end that screws into a socket. / βιδωτή ασφάλεια</p> <p><b>polarity</b> [N-UNCOUNT-U9] Polarity is the state of having positive and negative electrical charges. / ποιτικότητα</p> <p><b>post connector</b> [N-COUNT-U1] A post connector is a connector used to attach a single wire to a piece of equipment. / συνδετήρας μονού καλωδίου με συσκευή</p> <p><b>precaution</b> [N-COUNT-U14] A precaution is a safety measure that workers take in order to avoid a hazardous situation. / προφύλαξη</p> <p><b>prevention</b> [N-UNCOUNT-U15] Prevention is the act of stopping something from happening. / πρόληψη</p>
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- protection** [N-UNCOUNT-U2] Protection is the ability of a conduit to keep out certain dangers, such as a fire. / προστασία
- replacement** [N-COUNT-U6] A replacement is when a broken thing is changed for a new one. / αντικατάσταση
- remote** [ADJ-U5] If something is remote, it is set apart from something else that it is connected to. / απομακρυσμένος
- residential grade switch** [N-COUNT-U11] A residential grade switch is a light duty switch. It is used in homes and is cheaper in price. / οικιακός διακόπτης
- resistance** [N-UNCOUNT-U13] Resistance is the amount of voltage applied on two resistor terminals compared to the current that circulates between them. / αντίσταση
- right-of-way** [N-COUNT-U3] A right-of-way is a strip of land that is used by a utility company to construct and operate transmission lines. / χώρος για τοποθέτηση ηλεκτρικών καλωδίων
- ring terminal** [N-COUNT-U1] A ring terminal is a single wire connection in which a screw or bolt is inserted to make electrical contact. / καλώδιο σύνδεσης με βίδα/ μπουλόνι
- route** [N-COUNT-U2] A route is the specified course that a conduit goes along. / διαδρομή δικτύου
- safety cover** [N-COUNT-U15] A safety cover is a plastic plug that goes into an unused electrical outlet to prevent children from injuring themselves. / προστατευτικό κάλυμμα
- safeguard** [V-T-U4] If something safeguards something else, it protects it. / προφυλάσσω, προστατεύω
- safety precaution** [N PHRASE-U5] A safety precaution is something done to prevent something dangerous from happening. / προφύλαξη
- secondary** [ADJ-U5] If something is secondary, it serves a lesser purpose than something else. / δευτερεύων, βοηθητικός
- securely** [ADV-U15] If you fasten something securely, it is tied down or attached so it will not move easily or by accident. / με ασφαλή τρόπο, σταθερά
- service cable** [N-COUNT-U3] A service cable is a wire that provides a customer's property with electricity. It can be buried or aerial. / καλώδιο διανομής ηλεκτρικού ρεύματος
- service drop** [N-COUNT-U3] A service drop is the electrical line that runs from a buried service or an aerial service to a customer's building. / καλώδιο σύνδεσης με την παροχή ηλεκτρικού ρεύματος
- service entrance (SE)** [N-COUNT-U3] A service entrance (SE) is the place where electricity enters a building. / είσοδος παροχής ρεύματος
- service lateral** [N-COUNT-U3] A service lateral is a power supply that is located underground. / υπόγεια παροχή ηλεκτρικού ρεύματος
- shallow** [ADJ-U8] If a box is shallow, it does not have much space for wires. / ρηχός
- short** [V-I-U8] To short is to create an electrical connection that was not meant to happen. / παθαίνω βραχυκύκλωμα
- short circuit** [N-COUNT-U5] A short circuit is an electrical failure caused by improper or damaged electrical connections. / βραχυκύκλωμα
- single gang box** [N-COUNT-U10] A single gang box is an electrical box installed in a wall that delivers power to one switch. / μονός διακόπτης
- single outlet** [N-COUNT-U9] A single outlet is an outlet that can receive one plug receptacle. / μονή μπρίζα
- single pole breaker** [N-COUNT-U6] A single pole breaker is a circuit breaker that is connected to one hot bus bar and supplies 120-volt power to a circuit. / διακόπτης μονής ασφάλειας
- single pole switch** [N-COUNT-U11] A single pole switch is a basic on/off switch. It allows only one contact to open at a given time. / μονοπολικός διακόπτης
- snap** [V-I-U7] To snap is to fit quickly and snugly into a particular place, often causing a clicking noise. / κινούμαι απότομα και με κρότο
- soil condition** [N PHRASE-U13] Soil condition refers to the texture of the soil, such as dry, rocky, or wet. / η κατάσταση του εδάφους
- solderless connector** [N-COUNT-U1] A solderless connector connects wires by using mechanical pressure instead of solder. / συνδετήρας καλωδίων χωρίς υλικό συγκόλλησης
- spade terminal** [N-COUNT-U1] A spade terminal is the same as a ring terminal except that the metal part doesn't make a full ring. / καλώδιο σύνδεσης με ημικυκλική κεφαλή
- sphere of influence** [N PHRASE-U13] A sphere of influence is an electrical current that flows from the ground rod and into the soil that surrounds it. The current moves away from the ground rod in waves. / περιοχή στο έδαφος που περνάει το ρεύμα από τη γείωση
- split bolt connector** [N-COUNT-U1] A split bolt connector is used for taps and splices in building wiring. / κοχλιοσυνδετήρας αγωγού
- stability** [N-UNCOUNT-U7] Stability is the condition of being not easily changed or disrupted. / ευστάθεια φορτίου
- stray voltage** [N-UNCOUNT-U12] Stray voltage is electrical energy flowing through something that it should not be flowing through, such as a lamp post. / διαρροή τάσης
- subpanel** [N-COUNT-U5] A subpanel is the part of an electrical system that controls the delivery of power from the main service panel to all or part of a house or building. / δευτερεύων ηλεκτρικός πίνακας
- surge arrester** [N-COUNT-U12] A surge arrester is a piece of equipment which saves electrical systems from being negatively affected by lightning. / συσκευή προστασίας από υπερβολική τάση
- temporary** [ADJ-U15] If something is temporary, it is meant to last or be used for a short period of time. / προσωρινός
- terminal block connector** [N-COUNT-U1] A terminal block connector is used to connect individual electrical wires. / συνδετήρας καλωδίων
- three gang box** [N-COUNT-U10] A three gang box is an electrical box installed in a wall that delivers power to three switches. / ηθρίασιο διακοπών τριών θέσεων
- three-way switch** [N-COUNT-U11] A three-way switch is used for circuits with two different locations. / διακόπτης δύο οδών



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<p><b>timer switch</b> [N-COUNT-U11] A timer switch is a switch that is set to turn on or off at a desired time. / χρονοδιακόπτης</p> <p><b>toggle switch</b> [N-COUNT-U11] A toggle switch is an electrical switch with a lever. The lever moves up and down to control the switch. / διακόπτης με μοχλό</p> <p><b>traffic</b> [N-UNCOUNT-U15] Traffic is the movement of people or objects through an area. / κυκλοφοριακή κίνηση</p> <p><b>transfer</b> [V-T-U7] To transfer something is to move or redirect something. / μεταφέρω</p> <p><b>trip</b> [V-T-U6] To trip something is to trigger or release a switch to set something into operative mode. / ρίχνω την ασφάλεια (ήλω υπερφόρτισης του κυκλώματος)</p> <p><b>two gang box</b> [N-COUNT-U10] A two gang box is an electrical box installed in a wall that delivers power to two switches. / ηλίσιο διακοπών δύο θέσεων</p> <p><b>utility pole</b> [N-COUNT-U3] A utility pole is a large pole that is used to support overhead wires such as power lines and telephone wires. / κολώνα στήριξης καλωδίων διανομής ηλεκτρικού ρεύματος</p> <p><b>utility transformer</b> [N-COUNT-U3] A utility transformer is a device that changes electricity from high to low voltage. / μετατροπέας τάσης</p> <p><b>volume</b> [N-UNCOUNT-U8] Volume is the amount of space inside something measured in cubic units. / όγκος</p> <p><b>wall cavity</b> [N-COUNT-U10] A wall cavity is an opening in a wall where a fixture, such as a switch box, is mounted. / άνοιγμα στον τοίχο (για τοποθέτηση μπρίζας)</p> <p><b>weatherproof</b> [ADJ-U8] If something is weatherproof, it can endure any kind of weather. / αδιάβροχος, ανθεκτικός στις καιρικές συνθήκες</p> <p><b>wide slot</b> [N-COUNT-U9] A wide slot is the larger of the two rectangular slots in an electrical outlet. It connects to the neutral prong that receives a spent electrical current from the plug. / φαρδιά τρύπα στην μπρίζα</p> <p><b>worn out</b> [ADJ PHRASE-U15] When something is worn out, it has outlived its optimal usefulness or durability and should be replaced. / φθαρμένος</p> <p><b>zip cord</b> [N-UNCOUNT-U15] Zip cord is a set of two or more attached insulated wires that may be separated by pulling them apart. It is usually used for household appliances. / καλώδιο δύο αγωγών</p> <p><b>(Book 3)</b></p> <p><b>accessible</b> [ADJ-U 15] If something is accessible, it can be used or reached with ease. / διαθέσιμος, που μπορείς να βρεις</p> <p><b>accurate</b> [ADJ-U4] If a piece of information is accurate, it is correct. / ακριβής</p> <p><b>adjacent</b> [ADJ-U9] If something is adjacent to a particular object, it means it is near or close to it. / δίπλα σε</p> <p><b>air gap</b> [N-COUNT-U10] An air gap is the space between a heater and the wall through which air can flow. / κενό μεταξύ συσκευής και τοίχου</p> <p><b>air handler</b> [N-COUNT-U11] An air handler is a device that has a blower as well as heating and cooling parts. It controls how much air is sent out in an air conditioner or heater. / εξωτερική μονάδα κλιματιστικού/ θερμοσίφωνα</p>	<p><b>anticorrosion</b> [ADJ-U8] If something is anticorrosion, it protects a metal surface from breaking down due to chemical processes. / αντιδιαβρωτικό μέσο</p> <p><b>appliance</b> [N-COUNT-U9] An appliance is a device that performs a specific task. It is usually for household use. / οικιακή συσκευή</p> <p><b>arc fault</b> [N-COUNT-U5] An arc fault is an electrical surge or interruption that can cause fires. / βραχυκύκλωμα που προκαλεί φωτιά</p> <p><b>assumption</b> [N-COUNT-U14] An assumption is something you think is probably true even though there is no proof that it is. / υπόθεση, συμπέρασμα</p> <p><b>attach</b> [V-T-U3] To attach something is to join it to something else. / συνδέω</p> <p><b>ballast</b> [N-COUNT-U6] A ballast controls the voltage of electrical gas discharge lights (such as fluorescent lights). / σπραγγαλιστικό πηνίο (εξάρτημα που ενεργοποιεί ένα λαμπτήρα φθορισμού)</p> <p><b>bare</b> [ADJ-U6] If an object is bare, it is not covered and is open to view. / (για λαμπτήρα) γυμνός, χωρίς κάλυμμα</p> <p><b>base depth</b> [N-UNCOUNT-U6] Base depth is the amount of depth that must be allowed when installing a fixture in a ceiling. It is an important part of the measurements for an installation. / βάθος εγκατάστασης σε οροφή</p> <p><b>baseboard heater</b> [N-COUNT-U10] A baseboard heater is a heating system located around the perimeter of a room above the lowest part of the walls. / θερμαντικό σώμα τοίχου σε μικρή απόσταση από το πάτωμα</p> <p><b>build up</b> [N-COUNT-U13] A build up is a steady increase in the amount or level of something. / σταδιακή αύξηση</p> <p><b>build up</b> [N-UNCOUNT-U14] Build up refers to an increase in material or an accumulation of material. / σταδιακή αύξηση</p> <p><b>bulb</b> [N-COUNT-U6] A bulb is an electric device that gets hot and gives off light when electricity passes through it. / λαμπτήρας</p> <p><b>burn out</b> [V PHRASE-U8] To burn out is to stop functioning. / (για λαμπτήρα) καίγεται</p> <p><b>buzz</b> [V-U6] To buzz is to emit a type of low, vibrating, humming sound. / βουίζω</p> <p><b>care</b> [N-UNCOUNT-U3] The care of a device or object is the equipment needed or actions required to keep it in working order. / φροντίδα, προσοχή</p> <p><b>ceiling box</b> [N-COUNT-U6] A ceiling box is used to anchor light fixtures. It serves as a junction box where the fixture's wires meet. / κουτί σύνδεσης φωτιστικού οροφής</p> <p><b>ceiling fan</b> [N-COUNT-U7] A ceiling fan is a device with rotating blades that is attached to a ceiling and is used to move air around a room. / ανεμιστήρας οροφής</p> <p><b>charge</b> [N-COUNT-U13] A charge is the amount of stored electricity an object holds. / ηλεκτρικό φορτίο</p> <p><b>circuit breaker ground fault circuit interrupter</b> [N-COUNT-U2] A circuit breaker ground fault circuit interrupter protects against a ground fault and a circuit overload. / διακόπτης κυκλώματος βλάβης γείωσης</p> <p><b>circulate</b> [V-T-U7] To circulate something is to move something continuously throughout a space. / θέτω σε κυκλοφορία</p>
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- clearance** [N-UNCOUNT-U7] Clearance is the amount of space in which something can move without touching something else. / ελεύθερος χώρος
- coaxial cable** [N-COUNT-U14] A coaxial cable is an electrical cable with an inner conductor. It is used for radios, cable TV signals, and Internet connections. / ομοαξονικό καλώδιο
- coil** [N-COUNT-U3] A GFCI coil is a transformer that sends a warning signal when the sensor detects a change in the electrical current. / πηνίο
- compare** [V-T-U1] To compare is to examine two or more items (objects, people, ideas) so that similarities and differences can be noted. / συγκρίνω
- condensation** [N-UNCOUNT-U12] Condensation is the process by which something turns from a gaseous state to a liquid one. / συμπύκνωση
- configuration** [N-UNCOUNT-U2] Configuration is the arrangement of the parts of an object. / διάταξη
- consumption** [N-UNCOUNT-U10] Consumption is the act of making use of or consuming a resource. / κατανάλωση
- convenient** [ADJ-U2] If something is convenient, it is suitable or well-suited for a particular purpose. / βολικός, κατάλληλος
- cord connected ground fault circuit interrupter** [N-COUNT-U2] A cord connected ground fault circuit interrupter is a GFCI combined with an extension cord. It is useful for receptacles that do not have the protection of a GFCI. / διακόπτης κυκλώματος βλάβης γείωσης με καλώδιο προέκτασης
- corrode** [V-T-U6] To corrode metal is for a chemical reaction to take place that slowly destroys the metal. / διαβρώνω
- corrugated duct** [N-COUNT-U11] A corrugated duct is a flexible duct that has a shape consisting of ridges and grooves. / κυματοειδής αγωγός
- coverplate** [N-COUNT-U10] A coverplate is a piece of metal that covers the elements in a heating unit. / εξωτερικό κάλυμμα θερμαντικού σώματος
- coverage** [N-UNCOUNT-U8] Coverage is the amount of an area that is reached or covered by something. / πεδίο κάλυψης
- cross support** [N-COUNT-U7] A cross support is a solid beam that forms part of the structure of a ceiling. / εγκάρσιο δοκάρι
- cutoff switch** [N-COUNT-U11] A cutoff switch is a mechanism that is used to completely shut down or disable a device. / διακόπτης πλήρους απενεργοποίησης
- depth** [N-UNCOUNT-U12] Depth refers to the dimension an object takes. It is usually downward from an upper surface. / βάθος
- derate** [V-I-U9] If electrical devices derate, then the power rating of those devices is reduced. / (για συσκευή) μειώνεται η ισχύς της
- diagnose** [V-T-U4] To diagnose an electrical problem is to discover what kind of problem it is by inspecting it. / κάνω διάγνωση προβλήματος
- digital** [ADJ-U10] If something is digital, it displays data in the form of numbers. / ψηφιακός
- direct burial** [N-UNCOUNT-U12] Direct burial refers to a cable or wire that is installed directly in the earth. / καλώδιο άμεσης γείωσης
- discharge** [V-I-U13] To discharge means to relieve an object of a charge. / (για καλώδιο κ.λπ.) χάνει το ηλεκτρικό φορτίο του
- disconnect** [N-COUNT-U11] A disconnect is an act of disconnecting an object by mechanical means. / αποσύνδεση
- dishwasher** [N-COUNT-U9] A dishwasher is a machine that is used for washing kitchen dishes and utensils automatically. / πλυντήριο πιάτων
- downstream** [ADV-U1] If something is downstream, it is in the latter part of a system or process. / προς τα κάτω, σε αντίθετη κατεύθυνση
- drain** [V-T-U13] To drain means to withdraw a substance gradually. / παροχετεύω, απομακρύνω εντελώς
- drop-in** [ADJ-U9] If an object is described as being drop-in, it is ready for use and only needs to be lifted and placed in an opening. / (για συσκευή) εντοιχιζόμενη
- dry board** [N-COUNT-U1] A dry board is a white, glossy surface that is used for making non-permanent markings. / λευκός γυαλιστερός πίνακας
- dual pin bulb** [N-COUNT-U6] A dual pin bulb for fluorescent bulbs has two pins on each side that allows electricity to power the light. / λαμπτήρας με δύο ακίδες
- dusk-to-dawn light** [N-COUNT-U8] A dusk-to-dawn light is a light that automatically turns on when it senses darkness and turns off when it senses sunlight. / λαμπτήρας με φωτοκύτταρο
- electric clothes dryer** [N-COUNT-U11] An electric clothes dryer is an appliance that removes moisture from a load of clothing using electricity to generate heat. / ηλεκτρικό στεγνωτήριο ρούχων
- electric stove** [N-COUNT-U9] An electric stove uses electricity to produce heat for cooking and baking. / ηλεκτρική κουζίνα
- electric wall heater** [N-COUNT-U10] An electric wall heater is a heating unit in the wall which usually uses a fan to make hot air flow through a room. / αερόθερμο τοίχου
- electrode** [N-COUNT-U13] An electrode is a conductor. A current goes through it in order to enter or leave a non-metallic object. / ηλεκτρόδιο
- enclosed** [ADJ-U6] If an object is enclosed, it is surrounded or closed in on all sides. / (για λαμπτήρα) μέσα σε κάλυμμα
- endanger** [V-T-U14] To endanger means to create a dangerous situation or put something at risk. / θέτω σε κίνδυνο
- entry light** [N-COUNT-U8] An entry light is a light that illuminates an area outside a door or along a path to a door. / φωτιστικό εισόδου κτιρίου
- erratic** [ADJ-U5] If something is erratic, it is irregular or unpredictable in the way it moves. / με διακυμάνσεις, ασταθής
- exceed** [V-T-U1] To exceed is to go beyond in quantity or quality. / υπερβαίνω
- exemption** [N-COUNT-U5] An exemption is the state of being excused from something that most people must do. / εξίχνηση
- exposed** [ADJ-U8] If something is exposed it is visible or unprotected. / εκτεθειμένος, μη προστατευόμενος
- fault** [N-COUNT-U4] A fault is an irregular electrical current. / βλάβη κυκλώματος



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<p><b>feature</b> [N-COUNT-U3] A feature is a part of something that is important. / καθεμιά αν' τις λειτουργίες μιας συσκευής</p> <p><b>feed</b> [N-COUNT-U10] A feed is a wire that gives or passes electricity to a heating system. / καλώδιο τροφοδοσίας</p> <p><b>feed wire</b> [N-COUNT-U11] A feed wire is a wire that brings a current to a device. / καλώδιο τροφοδοσίας</p> <p><b>fine print</b> [N-UNCOUNT-U5] Fine print is the small writing containing important information that is often found at the bottom of documents. / ψιλά γράμματα</p> <p><b>floodlight</b> [N-COUNT-U8] A floodlight is a very bright light that illuminates a wide area. / προβολέας</p> <p><b>flow out</b> [V PHRASE-I-U1] To flow out means to come out of something, like a liquid. / απομακρύνομαι ρεόντας</p> <p><b>fluorescent</b> [ADJ-U6] If a light fixture is fluorescent, it emits light through exposure to radiation from an external source. / (για λαμπτήρα) φθορισμού</p> <p><b>follow</b> [V-T-U7] To follow something is to act in accordance or agreement with something. / ακολουθώ</p> <p><b>four-conductor cable</b> [N-COUNT-U11] A four-conductor cable has four insulated hot wires as well as a ground. / τετραπλό καλώδιο με γείωση</p> <p><b>frame screw</b> [N-COUNT-U9] A frame screw is used to fasten metal studs to a track. / βίδα συνθετικού ηλασιού</p> <p><b>garbage disposal</b> [N-COUNT-U9] A garbage disposal is a type of kitchen appliance that is used for disposing of garbage. It is an electric device that is usually installed under a kitchen sink. / σκουπιδοφάγος</p> <p><b>general-purpose</b> [ADJ-U1] If something is general-purpose, it can be used in many ways and is not restricted to one function. / γενικής χρήσης</p> <p><b>GFCI tester</b> [N-COUNT-U4] A GFCI tester is a device used to test the flow of electricity through circuits. / φορητή συσκευή για έλεγχο διαρροών ρεύματος</p> <p><b>give out</b> [V PHRASE-U4] To give out is to quit or shut off. / σταματώ να λειτουργώ</p> <p><b>go with</b> [V PHRASE-U2] To go with is to choose. / επιλέγω</p> <p><b>ground fault circuit interrupter (GFCI)</b> [N-COUNT-U1] A ground fault circuit interrupter (GFCI) is a circuit breaker that is fast-acting. If it senses an imbalance in an electrical current, it shuts off the electricity immediately. / διακόπτης κυκλώματος βλάβης γείωσης</p> <p><b>ground resistance</b> [N-UNCOUNT-U14] Ground resistance is the opposition of the earth to the current that flows through it. / αντίσταση της γείωσης</p> <p><b>ground skew</b> [N-COUNT-U15] A ground skew occurs when interconnected appliances are plugged into different circuits. In this situation, the appliances might not work properly at all times. / θανάσιμη σύνδεση συσκευών</p> <p><b>grounding block</b> [N-COUNT-U15] A grounding block is a device used to connect two coaxial cables to the earth. It helps to prevent surges. / συσκευή γείωσης</p> <p><b>hardwired</b> [ADJ-U9] If something is hardwired, it usually comes directly from a source and cannot be modified. / συνδεδεμένος με μόνιμη καλωδίωση</p> <p><b>hardwired surge protection</b> [N-UNCOUNT-U15] Hardwired surge protection is a type of protection with wires that are stripped and connected into a device. Some are encased in a metal box. / συσκευή προστασίας από διαρροές ρεύματος</p>	<p><b>heat pump</b> [N-COUNT-U11] A heat pump takes lower temperature heat from one location and moves it to another location at a higher temperature. / συσκευή θέρμανσης</p> <p><b>high output bulb</b> [N-COUNT-U6] A high output bulb is a type of bulb that produces brighter light due to high wattage. / λαμπτήρας έντονης φωτεινότητας</p> <p><b>horsepower</b> [N-UNCOUNT-U12] Horsepower is a measure of how powerful an electrical device is. / ιπποδύναμη, η ισχύς μιας συσκευής</p> <p><b>imbalance</b> [N-COUNT-U3] An imbalance occurs when there is more electric current going out of the device than there is coming back in. / ασυμμετρία στα ηλεκτρικά φορτία</p> <p><b>incandescent</b> [ADJ-U6] If a light fixture is incandescent, it emits light when it is heated. / (για λαμπτήρα) πυρακτώσεως</p> <p><b>independently</b> [ADV-U7] If something exists independently, it does not rely on other things in order to function. / χωριστά, ανεξάρτητα</p> <p><b>indicate</b> [V-T-U4] To indicate is to point toward or specify something. / υποδηλώνω, σημαίνω</p> <p><b>induced voltage</b> [N-UNCOUNT-U13] Induced voltage is voltage that is generated in a conductor when it has been subjected to a moving magnetic field. / επαγωγική τάση</p> <p><b>insulated crimp</b> [N-COUNT-U12] An insulated crimp is a type of wire that has been joined through heating. / συγκόλληση καλωδίων με θερμότητα</p> <p><b>integral thermostat</b> [N-COUNT-U10] An integral thermostat is a power-saving device which automatically turns the heater on and off when necessary. / θερμοστάτης</p> <p><b>interrupt</b> [V-T-U4] To interrupt an electrical current is to change or stop it. / διακόπτω</p> <p><b>joist</b> [N-COUNT-U6] A joist is a beam made of wood, steel, or concrete. It is set parallel from wall to wall to support a ceiling or a floor. / δοκάρτι</p> <p><b>jumper</b> [N-COUNT-U13] A jumper is a short length of conductor. It is used to make a temporary connection between the terminals of a circuit or to completely bypass a circuit. / βραχυκυκλωτήρας</p> <p><b>landscape light</b> [N-COUNT-U8] A landscape light is a low-voltage light that illuminates an outdoor area, usually in a manner that is visually appealing. / φωτιστικό εξωτερικού χώρου</p> <p><b>last resort</b> [N PHRASE-U2] A last resort is a solution to be used after all others have been rejected or have failed. / ύστατη λύση</p> <p><b>leakage</b> [N-UNCOUNT-U5] Leakage is the escape of electricity from an electrical system. / διαρροή ρεύματος</p> <p><b>light fixture</b> [N-COUNT-U6] A light fixture is a lighting unit that has one or more lamps, a socket, and various other parts that hold it in place. / φωτιστικό</p> <p><b>lightning</b> [N-UNCOUNT-U13] Lightning is an electric spark discharge that occurs in the atmosphere. It can occur within a cloud, between clouds, or between a cloud and the ground. / αστραπή</p> <p><b>line connection</b> [N-COUNT-U3] A line connection links wires to the electric panel and is the connection that provides the power. / σύνδεση παροχής με τον πίνακα</p>
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<p><b>load connection</b> [N-COUNT-U3] A load connection links the object using electricity to the outlet and is the connection that uses the power. / σύνδεση παροχής με την μπρίζα</p> <p><b>low-resistance grounding system</b> [N-COUNT-U14] A low-resistance grounding system protects a device such as a power transformer or generator from fault currents. / σύστημα γείωσης χαμηλής αντίστασης</p> <p><b>magnetic line of force</b> [N-COUNT-U13] A magnetic line of force is an imaginary line that exists in a field of force. The direction of the line at any point represents the direction of the force at that point. / νοητή δυναμική γραμμή μαγνητικού πεδίου</p> <p><b>manufacturer</b> [N-COUNT-U2] A manufacturer can be a person, a group of people, or a company that make or produce particular things. / κατασκευαστής</p> <p><b>marking</b> [N-COUNT-U5] A marking is a mark or symbol that identifies an object. / σύμβολο, σήμανση</p> <p><b>massive</b> [ADJ-U14] If something is massive, it is very large in size. / τεράστιος</p> <p><b>max out</b> [N-COUNT-U2] A max out is when the limit of a certain capacity is reached. / προσέγγιση ανώτατου ορίου</p> <p><b>mild</b> [ADJ-U1] If a substance is mild, it is not severe or extreme. / ήπιος</p> <p><b>mix up</b> [V PHRASE-U5] To mix up something is to confuse it with something else. / μπερδεύω, δεν μπορώ να ξεχωρίσω</p> <p><b>monitor</b> [V-T-U5] To monitor something is to check or watch it to find out what is happening. / παρακολουθώ, ελέγχω</p> <p><b>motion detector</b> [N-COUNT-U8] A motion detector is a device that activates a light when it senses movement. / ανιχνευτής κίνησης</p> <p><b>nameplate rating</b> [N-COUNT-U9] Nameplate rating refers to the maximum operating rating that has been applied to a piece of electrical equipment by the manufacturer. This includes amps, volts, and other specifications. / πινακίδα οικιακής συσκευής με στοιχεία αν' τον κατασκευαστή</p> <p><b>national electrical code</b> [N PHRASE-U5] The national electrical code is a set of rules for how to install electrical equipment. / εθνικός ηλεκτρικός κώδικας</p> <p><b>network interface device (NID)</b> [N-COUNT-U15] A network interface device (NID) is mounted on the side of a house. It is where the cables for the telephone go in and the wire for the house telephone goes out. / συσκευή παροχής τηλεφωνικής σύνδεσης</p> <p><b>nonconductive</b> [ADJ-U1] If an object is nonconductive, it does not have the capability of conducting. / μη αγωγίμος</p> <p><b>on site</b> [ADV PHRASE-U6] If a work project is on site, it takes place on the site or is located at the site. / στο χώρο εγκατάστασης, επί τόπου</p> <p><b>outgoing</b> [ADJ-U3] If a wire or current is outgoing, it is going away from the source that created or contains it. / εξερχόμενος</p> <p><b>peak</b> [N-COUNT-U14] A peak is the time when something is at its highest level. / ανώτατο σημείο, μέγιστη τιμή</p> <p><b>photoelectric cell</b> [N-COUNT-U8] A photoelectric cell is a sensor that measures the amount of light in a particular area. / φωτοκύτταρο</p>	<p><b>plug-in surge protection</b> [N-UNCOUNT-U15] Plug-in surge protection covers those surge protectors that are simply pushed into place on the service panel. / προστασία από υπέρταση με νοήμμπρίζο ασφαλείας</p> <p><b>point-of-entry</b> [ADJ-U15] If something is point-of-entry it is the first stage of surge protection that occurs where electricity enters a building. A point-of-entry protection system stops voltage spikes from affecting an entire house. / στο σημείο εισόδου</p> <p><b>point-of-use</b> [ADJ-U15] If something is point-of-use it is a stage of surge protection that occurs at the place electronics are used. It provides protection for more sensitive components such as home electronics, personal computers, fax machines, and other appliances. / στο σημείο χρήσης των συσκευών</p> <p><b>pool</b> [V-I-U12] To pool means to bring together in one place. / συσσωρεύομαι</p> <p><b>portable ground fault circuit interrupter</b> [N-COUNT-U2] A portable ground fault circuit interrupter is used when it is not practical to install a GFCI. It contains circuitry in a plastic enclosure. It also has receptacle slots in the front and plug blades in the back. / φορητός διακόπτης κυκλώματος βλάβης γείωσης</p> <p><b>pressure switch</b> [N-COUNT-U12] A pressure switch is a type of safety device. It is activated by specific amounts of pressure. / διακόπτης πίεσης, πρεσοστάτης</p> <p><b>primary</b> [ADJ-U5] If something is primary, it is first in level or importance. / πρωταρχικός, κύριος</p> <p><b>probe</b> [N-COUNT-U3] A probe is a piece of equipment used for getting information about something. / ακροδέκτης μέτρησης</p> <p><b>procure</b> [V-T-U2] To procure something is to get it from someone or someplace. / προμηθεύομαι, αποκτήω</p> <p><b>prong</b> [N-COUNT-U1] A prong is something that is pointed and projected. / βύσμα μπρίζας</p> <p><b>provide</b> [V-T-U3] To provide is to give or supply something. / παρέχω</p> <p><b>pulse</b> [N-COUNT-U14] A pulse is a series of disturbances in voltage or current. It usually occurs at regular intervals. / αστάθεια στην παροχή ρεύματος</p> <p><b>pump wire</b> [N-UNCOUNT-U12] Pump wire is a type of wire that can be used under water. / καλώδιο υποβρύχιας αντλίας</p> <p><b>range hood</b> [N-COUNT-U9] A range hood is an exhaust hood that is located over a kitchen range hood. It leads to a vent that exhausts unwanted fumes. / απορροφητήρας</p> <p><b>receptacle ground fault circuit interrupter</b> [N-COUNT-U2] A receptacle ground fault circuit interrupter combines a single GFCI device within one or more receptacle outlets. A receptacle type fits into a standard outlet box. / η μπρίζα με το διακόπτη κυκλώματος βλάβης γείωσης</p> <p><b>receptacle strip</b> [N-COUNT-U15] A receptacle strip is a unit that has plug-in outlets and contains surge protection circuits. / νοήμμπρίζο</p> <p><b>recur</b> [V-I-U15] To recur means that something happens again. / επαναλαμβάνομαι, επανεμφανίζομαι</p> <p><b>reference</b> [N-COUNT-U3] A reference is a guide someone goes to when they need help with a particular task. / νηγή, αναφορά</p>
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<p><b>refrigerator</b> [N-COUNT-U9] A refrigerator is an electrical kitchen appliance which keeps food and drink stored in it cool. / ψυγείο</p> <p><b>reliable</b> [ADJ-U1] If something is reliable, it can be trusted to do what it is expected to do. / αξιόπιστος</p> <p><b>rely on</b> [V PHRASE-U4] To rely on someone or something is to depend on that person or thing. / βασίζομαι σε</p> <p><b>remote control</b> [N-COUNT-U7] A remote control is a device that is used to control a machine or electronic equipment at a distance. / τηλεχειριστήριο</p> <p><b>renovate</b> [V-T-U2] To renovate something is to make it look new again by repairing or improving it. / ανακαινίζω</p> <p><b>reset</b> [ADJ-U2] Reset refers to a device's ability to have its settings changed by using a control mechanism so that it is ready to be used again. / επανεκκίνηση, επαναφορά ρυθμίσεων</p> <p><b>respective</b> [ADJ-U5] If two things belong to respective categories, they belong to two particular and different categories. / αντίστοιχος</p> <p><b>response time</b> [N-COUNT-U10] A response time is the amount of time it takes a heater to heat up after it is turned on. / χρόνος ενεργοποίησης (μιας συσκευής)</p> <p><b>reverse</b> [V-T-U3] To reverse is to change the usual order of the parts of something. / αντιστρέφω</p> <p><b>rigid duct</b> [N-COUNT-U11] A rigid duct is a type of duct that allows for thermal insulation and noise absorption. It is smooth-walled. / σταθερός αγωγός</p> <p><b>security</b> [N-UNCOUNT-U8] Security is the condition of being protected from danger. / ασφάλεια</p> <p><b>sense</b> [V-T-U5] To sense is to feel or detect by the use of the senses. / ανιχνεύω, εντονίζω</p> <p><b>sensitivity</b> [N-UNCOUNT-U8] Sensitivity is the level of ability to measure the changes or qualities of something. / ευαισθησία</p> <p><b>sensor</b> [N-COUNT-U3] A sensor is an object that distinguishes changes in its environment. / αισθητήρας</p> <p><b>shield</b> [N-COUNT-U13] A shield is a device that is used to protect a person or an object. / περιβλήμα, κάλυψη</p> <p><b>short out</b> [V PHRASE-U10] To short out is to make a wire or electrical device have a short circuit. / (για συσκευή) βραχυκυκλώνει</p> <p><b>siding</b> [N-UNCOUNT-U15] Siding is boards or shingles that are used as surface material for the outside of a building. / επένδυση τοίχων/οροφών</p> <p><b>single pin bulb</b> [N-COUNT-U6] A single pin bulb for fluorescent bulbs has one pin on each side that allows electricity to power the bulb. / λαμπτήρας με μονή ακίδα</p> <p><b>slant</b> [N-COUNT-U8] A slant is the angle of a surface that is not straight up and down or side to side. / κλίση (επιφάνειας)</p> <p><b>slide-in</b> [ADJ-U9] If an object is described as being slide-in, it is ready for use and only needs to be pushed into place. / (για συσκευή) ημιεντοιχιζόμενη</p> <p><b>socket</b> [N-COUNT-U6] A socket supports a light fixture and allows it to connect with an electrical current. / πειματοδότης, η μπριζα του τοίχου</p> <p><b>stable</b> [ADJ-U7] If something is stable, it stays securely in one place and cannot be moved easily. / σταθερός, στερεός</p>	<p><b>standard</b> [ADJ-U2] If something is standard, it is regarded as being common or customary. / κοινός, καθιερωμένος</p> <p><b>sticker</b> [N-COUNT-U3] A sticker is a paper with one adhesive side that clings to another surface. / αυτοκόλλητο χαρτάκι</p> <p><b>strain relief</b> [N-COUNT-U9] A strain relief refers to a device that is attached to an electrical cord. It reduces the amount of strain on the cord. / συσκευή που περιορίζει την ένταση του ρεύματος ενός καλωδίου</p> <p><b>strike</b> [N-COUNT-U14] A strike is the act or instance of hitting something. A lightning strike is when lightning hits an object or person. / χτύπημα αστραπής</p> <p><b>submersible pump</b> [N-COUNT-U12] A submersible pump is a type of pump that is cased in a protective housing along with its electric motor. The casing allows the unit to be used under water. / βυθιζόμενη αντλία</p> <p><b>surge</b> [N-COUNT-U13] A surge is excessive electrical voltage running through a cable. / υπερβολική τάση</p> <p><b>surge breaker</b> [N-COUNT-U15] A surge breaker is installed in the main service panel and serves to prevent massive surges from coming in through the utility line. / διακόπτης προστασίας από υπερβολική τάση του ρεύματος</p> <p><b>surge protector</b> [N-COUNT-U15] A surge protector is an appliance that protects a device from voltage spikes. It regulates the voltage supplied to that device. / συσκευή για προστασία από υπερβολική τάση του ρεύματος</p> <p><b>sustain</b> [V-T-U5] To sustain is to continue to maintain something or keep it working. / διατηρώ</p> <p><b>swing-up</b> [ADJ-U7] If a fan is swing-up, it can be hung at an angle during wiring and then swung into place to complete installation. / με ταλαντευόμενο στερεωτή</p> <p><b>terminal</b> [N-COUNT-U3] A terminal is the place used to connect two or more wires. / συσκευή όπου καταλήγουν οι συνδέσεις</p> <p><b>test button</b> [N-COUNT-U4] A test button is a button that you can push in order to test or check whether a device is working. / διακόπτης ελέγχου λειτουργίας</p> <p><b>throw</b> [V-T-U4] To throw is to move a switch in order to turn something on or off. / ανοίγω/κλείνω (διακόπτη)</p> <p><b>unintentional</b> [ADJ-U5] If something is unintentional, it is not done on purpose. / μη σκόπιμος, ακούσιος</p> <p><b>utility line</b> [N-COUNT-U14] A utility line is a wire that is provided and owned by a utility company. It carries a power supply. / κεντρικό καλώδιο παροχής ηλεκτρικής ενέργειας σε καταναλωτή</p> <p><b>utility transformer</b> [N-COUNT-U14] A utility transformer is a device used to transfer electric energy from one circuit to another and causes change in voltage or currents. / μετατροπέας τάσης</p> <p><b>variable-speed</b> [ADJ-U7] If something is variable-speed, it has settings that allow a user to operate it faster or more slowly. / μεταβλητής ταχύτητας</p> <p><b>variable-wattage unit</b> [N-COUNT-U10] A variable-wattage unit is a heating system that can vary the amount of wattage it uses and is ideal for huge rooms or whole houses. / μονάδα θέρμανσης εναρτισσόμενης ισχύος</p> <p><b>vent run</b> [N-COUNT-U11] A vent run connects an electric clothes dryer to the outside ventilation system. / αγωγός εξαερισμού</p>
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*Career Paths: Electrician – Glossary*

**verify** [V-T-U4] To verify is to test or check something to make sure that it is correct. / εξασφαλίζω, ελέγχω για επιβεβαίωση

**vertical** [ADJ-U1] If something is vertical, it is upright or running lengthwise up and down. / κάθετος, κατακόρυφος

**via** [PREP-U1] Via means to do something by way of a particular route. / μέσω, δια μέσου

**voltage spike** [N-COUNT-U14] A voltage spike is a sudden increase of voltage. It can cause serious damage to electronic circuits. / απότομη αύξηση τάσης

**wall thermostat** [N-COUNT-U10] A wall thermostat is a unit on the wall that allows homeowners to read and adjust the temperature of a heating system. / θερμοστάτης τοίχου

**water heater** [N-COUNT-U11] A water heater generates heat by heating incoming cold water from a water main or well. / θερμοσίφωνας

**watertight** [ADJ-U8] If something is watertight, water cannot pass through it. / αδιάβροχος

**well** [N-COUNT-U12] A well is a hole that is bored or drilled into the earth in order to obtain a substance such as water or oil. / πηγάδι

**well cap** [N-COUNT-U12] A well cap is installed on the top of a well casing. It prevents solid material and insects from getting in the well. / καπάκι πηγαδιού

**well casing** [N-COUNT-U12] A well casing is a tube-shaped lining of a well that is either bored or drilled. / επένδυση πηγαδιού

**whip** [N-COUNT-U9] A whip is found in drop-in types of range hoods and electric stoves. It is a pigtail of wires that hangs from the unit. / συστάδα καλωδίων συσκευών

**wobble** [V-I-U7] To wobble is to move back and forth unsteadily. / ταλαντεύομαι, είμαι ασταθής

**zap** [V-T-U13] To zap means to strike suddenly or instantly. / χτυπώ κάποιον με ρεύμα

## GLOSSARY: from Plumbing, Express Publishing, 2022

### Book 1

- **ABS pipe**

[N-COUNT-U11] **ABS pipe** is pipe made of acrylonitrile butadiene styrene.

- **adapter**

[N-COUNT-U12] An **adapter** is a fitting used to adapt one fitting or section of a pipe, so that it can connect to another section of a plumbing system.

- **add**

[V-T-U8] To **add** numbers is to combine them.

- **adjust**

[V-T-U5] To **adjust** something is to move it into another position.

- **adjustable wrench**

[N-COUNT-U2] An **adjustable wrench** is a wrench that can be changed to fit different sized nuts.

- **aerator**

[N-COUNT-U15] An **aerator** is part of a faucet which controls how water sprays out of the faucet.

- **air compressor**

[N-COUNT-U3] An **air compressor** is a device that takes in air at atmospheric pressure and delivers it at a higher pressure.

- **air gap**

[N-COUNT-U15] An **air gap** is a vertical space below a water spout which stops used water from flowing into the same spout fresh water comes from.

- **and**

[CONJ-U8] **And** is used when combining or adding numbers. For example, one and one equals two.

- **angled jaw pliers**

[N-COUNT-U2] **Angled jaw pliers** are a pair of pliers with jaws bent in one direction, used to grip and bend when performing precision work.

- **backflow**

[N-UNCOUNT-U13] **Backflow** occurs when water or other substances enter a water system through a reversed flow; backflow can be dangerous because it allows system contamination.

- **ball peen hammer**

[N-COUNT-U1] A **ball peen hammer** is a tool with a thick head used to shape metal.

- **basin**

[N-COUNT-U14] A **basin** is a large bowl which contains or carries water.

- **basin wrench**

[N-COUNT-U2] A **basin wrench**, also called a sink wrench, is used to remove or install the fasteners that hold a sink faucet in place.

- **bathroom**

[N-COUNT-U14] A **bathroom** is a room which contains a toilet, sink, and shower or bathtub.

- **bathtub**

[N-COUNT-U14] A **bathtub** is a large basin for taking baths and showering.

- **bathtub faucet**

[N-COUNT-U15] A **bathtub faucet** is a fixture which controls the flow of water through a pipe into a bathtub.

- **bidet**

[N-COUNT-U14] A **bidet** is a water-spraying tube attached to some toilets used for cleaning oneself after using the toilet.

- **brass**

[N-UNCOUNT-U7] **Brass** is an alloy of copper and zinc.

- **bushing**

[N-COUNT-U12] A **bushing** is a small reducing fitting that inserts into a pipe or hub.

- **cast iron**

[N-UNCOUNT-U7] **Cast iron** is a relatively brittle iron alloy, usually containing silicon and carbon, commonly used in cookware and pipes.

- **centimeter**

[N-COUNT-U9] A **centimeter** is a metric unit that measures length or distance, equal to ten millimeters.

- **chalk box**

[N-COUNT-U1] A **chalk box** is a tool used to mark out long, straight lines.

- **check valve**

[N-COUNT-U13] **Check valves** are devices that prevent backflow by allowing water to travel in only one direction in a piping system.

- **chrome**  
[N-UNCOUNT-U7] **Chrome** is a thin layer of the element chromium added to a metal object as a protective or decorative finish.
- **circular saw**  
[N-COUNT-U3] A **circular saw** is a metal disc or blade that is toothed and is attached to a machine that causes the blade to spin and cut materials. It can be hand-held or attached to a table.
- **claw hammer**  
[N-COUNT-U1] A **claw hammer** is a tool used to insert nails into a wall or other object.
- **combination pliers**  
[N-COUNT-U2] **Combination pliers** are heavy-duty pliers with wedged gripping jaws, an edge for cutting wire, and insulated handles, and are used for a wide variety of wire working jobs.
- **come to**  
[V-PHRASE-U8] To **come to** a number is to equal that number.
- **conversion**  
[N-UNCOUNT-U9] **Conversion** is the process of changing from one state or mode into another.
- **copper**  
[N-UNCOUNT-U7] **Copper** is a reddish-brown metal with high heat and electric conductivity, commonly used to make electrical wires and pipes.
- **copper flaring tool**  
[N-COUNT-U2] A **copper flaring tool** is a tool used to expand copper tubing so it fits a pipe.
- **countertop**  
[N-COUNT-U14] A **countertop** is a flat surface where people prepare food and do other work.
- **coupling**  
[N-COUNT-U12] A **coupling** is a fitting that connects two equal sized pipe ends to create one continuous pipe.
- **CPVC pipe**  
[N-UNCOUNT/COUNT-U11] **CPVC pipe** is rigid pipe made of chlorinated polyvinyl chloride.
- **crimping tool**  
[N-COUNT-U2] A **crimping tool** is a tool that joins wiring to the end of a cable.
- **cut**  
[V-T-U5] To **cut** something is to separate or divide it with a blade or edge.

- **depth**  
[N-COUNT-U10] **Depth** is the measurement from the top to the bottom of something.
- **diverter**  
[N-COUNT-U15] A **diverter** is a fixture which directs the flow of water to and from the bathtub faucet and the shower faucet.
- **drill bit**  
[N-COUNT-U3] A **drill bit** is a long, thin metal piece at the front of a drill that is driven into wood or other material.
- **drive**  
[V-T-U6] To **drive** something is to cause it to move by force or compulsion.
- **ductile**  
[ADJ-U11] If something is **ductile** it can have its shape changed easily.
- **durability**  
[N-UNCOUNT-U10] **Durability** is the use, wear, and strain something can take before being damaged.
- **dust mask**  
[N-COUNT-U4] A **dust mask** is a flexible pad over the mouth and nose designed to protect the wearer from breathing small particles in the air.
- **earplugs**  
[N-COUNT-U4] **Earplugs** are devices worn inside the ears to protect them from very loud noises.
- **elbow**  
[N-COUNT-U12] An **elbow** is a fitting that creates a bend or offset in a plumbing system.
- **equal**  
[V-T-U8] To **equal** a number is to be the correct answer to a mathematical problem.
- **face shield**  
[N-COUNT-U4] A **face shield** is a thick plate worn to protect the face and eyes from hazardous materials.
- **female**  
[ADJ-U12] If a pipe or fitting is **female**, it has internal threads that screw onto male fittings.
- **first aid kit**  
[N-COUNT-U4] A **first aid kit** is a collection of supplies used to give immediate medical help to an injured person.



- **fitting**  
[N-COUNT-U12] A **fitting** is a part of a plumbing system that connects sections of pipe or other fittings to create an offset or other desired connection.
- **flexible**  
[ADJ-U10] If something is **flexible**, it is able to bend out of its original shape.
- **gas cock**  
[N-COUNT-U13] A **gas cock** is an isolation valve designed for use in a gas distribution system.
- **gate valve**  
[N-COUNT-U13] A **gate valve** is a type of isolation valve generally used in water distribution systems; gate valves function by lifting or lowering a gate into the flow.
- **goggles**  
[N-COUNT-U4] **Goggles** are similar to safety glasses, but are often attached to the head with a band.
- **grasp**  
[V-T-U6] To **grasp** something is to grab on to it and hold it.
- **grinder**  
[N-COUNT-U3] A **grinder** is a device used to sharpen tools.
- **grip gloves**  
[N-COUNT-U4] **Grip gloves** are protective clothing worn over the hands with special surfaces on the fingers for grasping objects.
- **hacksaw**  
[N-COUNT-U1] A **hacksaw** is a tool with a blade generally used for cutting metal.
- **hammer drill**  
[N-COUNT-U3] A **hammer drill** is a rotary drill that uses a hammer thrust action to drill through various materials.
- **handle**  
[N-COUNT-U15] A **handle** is an attachment to something that can be gripped.
- **hard hat**  
[N-COUNT-U4] A **hard hat** is a thick hat designed to protect the user's head from falling objects.
- **height**  
[N-UNCOUNT-U10] **Height** is the measurement of the distance from something's highest point to the lowest point.

- **hose bibb**  
[N-COUNT-U13] A **hose bibb** is a water distribution outlet valve with a handle and a threaded spout to which a garden hose attaches.
- **hose outlet**  
[N-COUNT-U13] A **hose outlet** is a connection point in piping systems where water or other fluid can be drained or added.
- **hub**  
[N-COUNT-U12] A **hub** is an enlarged end of a pipe or fitting that receives another pipe or fitting.
- **hundred**  
[N-COUNT-U8] **Hundred** is combined with another number to abbreviate numbers in the thousands. For example, the number 2,300 could be stated twenty-three hundred.
- **imperial**  
[ADJ-U9] If something is **imperial**, it involves the system of measurement based on the inch and the pound.
- **inch**  
[N-COUNT-U9] An **inch** is an imperial unit that measures length or distance.
- **insert**  
[V-T-U6] To **insert** something is to place it inside of a place or another object.
- **inside diameter (ID)**  
[N-COUNT-U11] The **inside diameter (ID)** of a pipe is the length of a straight line that passes through the center of the cross section of a pipe and has endpoints on the inside surface of the pipe.
- **is**  
[V-T-U8] If the answer to a mathematical problem **is** a number, it equals that number.
- **isolation valve**  
[N-COUNT-U13] An **isolation valve** is a valve that separates a liquid, gas, or other fluid from the rest of a piping system.
- **jackhammer**  
[N-COUNT-U3] A **jackhammer** is a large portable drill that is driven by compressed air and is used to drill rock and break up pavement.
- **joint**  
[N-COUNT-U12] A **joint** is the point where pipes and/or fittings connect.

- **kilogram**  
[N-COUNT-U9] A **kilogram** is a metric unit that measures weight.
- **kitchen sink**  
[N-COUNT-U14] A **kitchen sink** is a basin found in the kitchen used mostly to wash dirty dishes.
- **kneepads**  
[N-COUNT-U4] **Kneepads** are clothing designed to protect knees from the impact of a fall or strike.
- **kPa**  
[N-COUNT-U9] The **kPa** (kilopascal) is a metric unit of measurement of pressure.
- **laundry**  
[N-UNCOUNT-U14] **Laundry** is dirty clothing to be washed or a room where people wash clothes.
- **lavatory**  
[N-COUNT-U14] A **lavatory** is a bowl for washing or a room with one or more toilets and hand sinks.
- **lavatory faucet**  
[N-COUNT-U15] A **lavatory faucet** is a fixture which controls the flow of water in a bathroom sink.
- **leather gloves**  
[N-COUNT-U4] **Leather gloves** are protective clothing worn over the hands made from animal skin.
- **length**  
[N-UNCOUNT-U10] **Length** is the measurement of how long something is.
- **less**  
[PREP-U8] **Less** is used when taking a number away from another.
- **level**  
[N-COUNT-U1] A **level** is a tool used to measure how flat something is.
- **locking pliers**  
[N-COUNT-U2] **Locking pliers** are pliers that can be locked in any position.
- **loosen**  
[V-T-U6] To **loosen** something is to relax it and cause it to be less restrained.
- **male**  
[ADJ-U12] If a pipe or fitting is **male**, it has external threads that screw into female fittings.
- **mark**  
[V-T-U5] To **mark** something is to place a sign or visible indicator on or next to it.
- **measure**  
[V-T-U5] To **measure** something is to record its size, shape, or amount in standard units.
- **metric**  
[ADJ-U9] If something is **metric**, it involves the system of measurement based on the meter and the kilogram.
- **millimeter**  
[N-COUNT-U9] A **millimeter** is a metric unit that measures length or distance, equal to 1/10 of a centimeter.
- **minus**  
[PREP-U8] **Minus** is used when taking away a number from another.
- **multiplied by**  
[V-PHASE-U8] If a number is **multiplied by** another, it is added onto itself that number of times.
- **needle nose pliers**  
[N-COUNT-U2] **Needle nose pliers** are pliers with a long nose used for reaching narrow spaces and completing precision wire jobs.
- **nominal diameter**  
[N-COUNT-U11] A **nominal diameter** is the size of pipes and their fittings that is used for naming and ordering, but does not refer to actual dimensions.
- **nut driver**  
[N-COUNT-U1] A **nut driver** is a tool with a socket used to tighten nuts and bolts.
- **offset**  
[N-COUNT-U12] An **offset** is a section of a piping system that changes direction at a particular angle expressed in degrees.
- **outside diameter (OD)**  
[N-COUNT-U11] The **outside diameter (OD)** of a pipe is the length of a straight line that passes through the center of a cross section of the pipe and has endpoints on the outer surface of the pipe.
- **PE tubing**  
[N-UNCOUNT-U11] **PE tubing** is tubing made of polyethylene and used for radiant heating systems and geothermal heat pump systems.

- **perforated pipe**  
[N-UNCOUNT-U11] **Perforated pipe** is drainage pipe with slots or holes in it to allow ground water to enter the pipe and be carried away.
- **PEX tubing**  
[N-UNCOUNT-U11] **PEX tubing** is PE tubing that is cross linked.
- **Phillips screwdriver**  
[N-COUNT-U1] A **Phillips screwdriver** is a tool used to turn Phillips screws, which have two short slots that meet at a right angle.
- **pipe**  
[N-COUNT-U11] A **pipe** is a hollow cylinder used to convey fluids from one place to another.
- **pipe wrench**  
[N-COUNT-U2] A **pipe wrench** is a type of adjustable wrench with a toothed jaw used for turning cylindrical objects (such as pipes).
- **pistol drill**  
[N-COUNT-U3] A **pistol drill** is a tool that looks like a handgun and is used to drill small diameter holes through thin materials and to install wood blocks to support pipes or other fixtures.
- **plastic**  
[N-UNCOUNT-U7] **Plastic** is a malleable, synthetic or semi-synthetic material that can be molded when soft and then set to a rigid form, used to make industrial materials.
- **plastic pipe saw**  
[N-COUNT-U1] A **plastic pipe saw** is a tool with a blade used for cutting pipe made of plastic.
- **plumb bob**  
[N-COUNT-U1] A **plumb bob** is a weight attached to a line used to determine if something is perpendicular to something else.
- **point**  
[N-COUNT-U8] **Point** represents a decimal or comma when speaking numbers aloud.
- **porcelain**  
[N-UNCOUNT-U7] **Porcelain** is a hard ceramic material made by heating clay, commonly used to create sinks and toilets.
- **pound**  
[N-COUNT-U9] A **pound** is an imperial unit that measures weight.

- **pressure reducing valve**  
[N-COUNT-U13] A **pressure reducing valve** is a mechanism that lowers the pressure of water that passes through it to a desired level.
- **psi**  
[N-COUNT-U9] **PSI (Pounds per square inch)** is an imperial unit of measurement of pressure.
- **pull**  
[V-T-U6] To **pull** something is to exert force on it in a direction towards oneself.
- **push**  
[V-T-U6] To **push** something is to exert force on it in a direction away from oneself.
- **PVC pipe**  
[N-UNCOUNT/COUNT-U11] **PVC pipe** is rigid pipe made of polyvinyl chloride.
- **reciprocating saw**  
[N-COUNT-U3] A **reciprocating saw** is a saw that cuts by utilizing a push and pull reciprocation motion of the blade.
- **reduced-pressure zone (RPZ) device**  
[N-COUNT-U13] A **reduced-pressure zone (RPZ) device** is a series of check valves that prevent backflow where contamination presents a serious hazard.
- **reducer**  
[N-COUNT-U12] A **reducer** is a fitting that connects pipes or fittings of different sizes together.
- **release**  
[V-T-U6] To **release** something is to let go of it.
- **relief valve**  
[N-COUNT-U13] A **relief valve** allows excess pressure to escape from a system before the pressure damages the system.
- **remove**  
[V-T-U6] To **remove** something is to take it out of a place or another object.
- **right angle drill**  
[N-COUNT-U3] A **right angle drill** is a powerful tool used to drill through wood in tight or small areas.
- **rigid**  
[ADJ-U10] If something is **rigid**, it is extremely inflexible.
- **rotate**  
[V-T-U5] To **rotate** something is to turn it on its axis.

- **rubber**  
[N-UNCOUNT-U7] **Rubber** is an elastic solid made from latex of the wild rubber tree.
- **rust**  
[N-UNCOUNT-U7] **Rust** is a substance that forms when metal oxidizes after coming in contact with water.
- **saber saw**  
[N-COUNT-U3] A **saber saw** is a type of reciprocating saw that uses a toothed blade and is especially useful for tight spaces and corners.
- **safety glasses**  
[N-COUNT-U4] **Safety glasses** are thick lenses worn over the eyes to protect them from flying objects.
- **saw**  
[V-T-U5] To **saw** something is to divide it into pieces with a toothed instrument.
- **schedule**  
[N-COUNT-U11] A **schedule** is a pipe classification that indicates the thickness of the wall of the pipe.
- **segment**  
[N-COUNT-U5] A **segment** is a part of something that has been divided.
- **shower**  
[N-COUNT-U14] A **shower** is the part of a bathroom which has a water-spraying nozzle where people can wash.
- **shower faucet**  
[N-COUNT-U15] A **shower faucet** is a fixture attached to the higher part of the shower wall which sprays water downward.
- **sink**  
[N-COUNT-U14] A **sink** is a basin which has a drain and faucet.
- **slice**  
[V-T-U5] To **slice** something is to separate or divide it with a blade in a smooth or quick manner.
- **slide**  
[V-T-U5] To **slide** something is to move it along a surface.
- **slotted screwdriver**  
[N-COUNT-U1] A **slotted screwdriver** is a tool used to turn slotted screws, which have one long slot.

- **smooth jaw pipe wrench**  
[N-COUNT-U2] A **smooth jaw pipe wrench** is a wrench with toothless jaws designed for work on finished objects without scratching.
- **spout**  
[N-COUNT-U15] A **spout** is the opening of a pipe or tube from which water is released.
- **stainless steel**  
[N-UNCOUNT-U7] **Stainless steel** is an alloy of steel with very high resistance to corrosion and rust due to its high chromium content.
- **steel**  
[N-UNCOUNT-U7] **Steel** is a hard, gray alloy consisting mostly of iron combined with a small amount of carbon and often other elements.
- **steel-toed boots**  
[N-COUNT-U4] **Steel-toed boots** are protective shoes with a steel reinforcement to protect toes from falling objects or a puncture from below.
- **stop**  
[N-COUNT-U13] A **stop** is a type of isolation valve that can be adjusted by hand.
- **stop-and-waste valve**  
[N-COUNT-U13] A **stop-and-waste valve** is a stop isolation valve that allows for drainage of the isolated portion of the system.
- **street**  
[N-COUNT-U12] A **street** is an offset fitting in which one end has the same connecting gender or outside diameter as the connecting pipe or fitting.
- **strength**  
[N-UNCOUNT-U10] **Strength** is the ability to withstand force from outside or the amount of force something can give.
- **subtract**  
[V-T-U8] To **subtract** a number is to take it away from another number.
- **tape measure**  
[N-COUNT-U1] A **tape measure** is a tool used to determine the length of something.
- **tees**  
[N-COUNT-U12] **Tees** are three-way fittings used to connect a branch pipe to the main plumbing system.
- **thickness**  
[N-COUNT-U10] **Thickness** is the measurement of the distance between two surfaces of an object.



- **threaded**  
[ADJ-U12] If a pipe or fitting is **threaded**, it has spiraled grooves by which to connect with other threaded pipes or fittings.
- **tighten**  
[V-T-U6] To **tighten** something is to constrict it and fix it closely in place.
- **tilt**  
[V-T-U5] To **tilt** is to move into an inclined position.
- **times**  
[PREP-U8] **Times** is used when multiplying numbers.
- **toilet**  
[N-COUNT-U14] A **toilet** is a bowl-like fixture in a bathroom in which people expel bodily fluids.
- **tool box**  
[N-COUNT-U1] A **tool box** is a portable container used to carry tools.
- **torque wrench**  
[N-COUNT-U2] A **torque wrench** is a tool used to apply a specific, pre-measured circular force to a nut or a bolt.
- **tub and shower faucet**  
[N-COUNT-U15] A **tub and shower faucet** is a fixture which controls the flow of water into a shower and bathtub.
- **tube**  
[N-COUNT-U11] A **tube** is a hollow cylinder, more flexible than pipe and less flexible than tubing that is used to convey fluids from one place to another.
- **tubing**  
[N-UNCOUNT-U11] **Tubing** is a hollow cylinder more flexible than a tube that is used to convey fluids.
- **tubing cutter**  
[N-COUNT-U2] A **tubing cutter** is a hand tool with a sharp wheel that makes straight incisions on metal or plastic pipes.
- **turn**  
[V-T-U5] To **turn** something is to rotate or spin it.
- **twist**  
[V-T-U6] To **twist** something is to turn it and rotate it in a winding direction.
- **union**  
[N-COUNT-U12] A **union** is a fitting installed to connect sections of a piping system while allowing for easy access to the joint later on.

- **utility knife**  
[N-COUNT-U1] A **utility knife** is a small tool used to cut various materials, such as cardboard or rope.
- **wallboard saw**  
[N-COUNT-U1] A **wallboard saw** is a tool with a blade used for cutting sections of a wall.
- **water closet**  
[N-COUNT-U14] A **water closet** is a room containing a toilet.
- **weight**  
[N-COUNT-U10] **Weight** is the measure of how heavy something is.
- **width**  
[N-COUNT-U10] The **width** of an object is the measurement of an object from side to side.

## Book 2

- **abbreviation**  
[N-COUNT-U11] An **abbreviation** is a shortened form of a phrase or word.
- **above ground layout**  
[N-COUNT-U15] An **above ground layout** is a plan showing where fixtures and structures will be located inside a building.
- **appliance**  
[N-COUNT-U4] An **appliance** is an electric machine that is used for a particular household purpose.
- **back support**  
[N-COUNT-U14] A **back support** is a garment that wraps around the body to prevent injury while doing heavy lifting.
- **backflow**  
[N-UNCOUNT-U5] **Backflow** is the flow of water back in the direction it came from.
- **baffle tube**  
[N-COUNT-U6] A **baffle tube** is part of a gas water heater that is placed inside the tank and collects exhaust fumes.
- **bagging and tagging**  
[N-UNCOUNT-U13] **Bagging and tagging** is the act of putting items into a container for later use and marking the container with the name of the items.
- **basket strainer**  
[N-COUNT-U1] A **basket strainer** is used in a kitchen sink to connect the sink with the drainage system.

- **bath waste and overflow (BW&O)**  
[N-COUNT-U1] A **bath waste and overflow (BW&O)** drain assembly is used to control water levels in a bathtub.
- **batter board**  
[N-COUNT-U15] A **batter board** is a wooden structure used by plumbers so they can use string to mark wall locations and wall thickness.
- **bay**  
[N-COUNT-U5] A **bay** is a walled in area on three sides.
- **bird's-eye view**  
[N-COUNT-U11] A **bird's-eye view**, also known as a plan view, is a visual of a design shown from above.
- **blueprint**  
[N-COUNT-U11] A **blueprint** is a drawing of a mechanical design or architectural plan that appears as white lines on a blue background.
- **boiler drain**  
[N-COUNT-U9] A **boiler drain** is the drain outlet on a water heater that drains the storage tank.
- **boot**  
[N-COUNT-U4] A **boot** is a rubber piece that connects a dishwasher hose to a garbage disposal.
- **braze**  
[V-T-U2] To **braze** something is to solder something without flux.
- **brush applicator**  
[N-COUNT-U2] A **brush applicator** is a bristled tool that is used to apply a sealant or compound.
- **BTU**  
[N-COUNT-U6] A **BTU (British Thermal Unit)** is the amount of heat necessary to heat one pound of water at a certain temperature by one degree Fahrenheit.
- **building drain**  
[N-COUNT-U3] A building **drain is the lowest** main drain of a DWV system that transports wastewater to a sewer.
- **building permit**  
[N-COUNT-U10] A **building permit** is a document authorizing the construction of a building.

- **building sewer**  
[N-COUNT-U3] A **building sewer** transports wastewater from a building drain to a point of disposal.
- **burner assembly**  
[N-COUNT-U6] A **burner assembly** is a component of a water heater including the pilot light and the gas burner.
- **carry**  
[V-T-U10] To **carry** something is to take it from one place to another.
- **circulate**  
[V-T-U8] To **circulate** is to carry something in a closed system or to move in a closed circuit.
- **circulating pump**  
[N-COUNT-U8] A **circulating pump** is a device that forces water, gas or other materials to flow in a closed system or closed circuit.
- **cleaner**  
[N-COUNT-U2] A **cleaner** is a substance that is used to remove grease or debris from a surface.
- **cleanout**  
[N-COUNT-U3] A **cleanout** is a DWV fitting installed to clear obstructions from a drain or sewer.
- **compound**  
[N-COUNT-U2] A **compound** is a substance formed by two or more parts that joins or seals something.
- **confirm**  
[V-T-U10] To **confirm** something is to make sure it is right or true.
- **conserve**  
[V-T-U8] To **conserve** something is to save it for possible later use or to reduce its use.
- **consult**  
[V-T-U10] To **consult** is to get advice or information from someone or something.
- **contact**  
[V-T-U10] To **contact** someone is to communicate with him or her.
- **dashed**  
[ADJ-U11] If a line is **dashed**, it is drawn in several small segments with gaps in between.
- **dip tube**  
[N-COUNT-U6] A **dip tube** is a tube attached to a water heater that carries cold water to the bottom of the water heater.

- **discharge**  
[N-UNCOUNT-U4] **Discharge** is liquid that flows or leaks out of something.
- **dishwasher**  
[N-COUNT-U5] A **dishwasher** is a machine used to clean dishes.
- **dolly**  
[N-COUNT-U14] A **dolly** is a two wheeled cart used to move heavy items.
- **dot**  
[N-COUNT-U11] A **dot** is a small round mark.
- **drafting**  
[N-UNCOUNT-U12] **Drafting** is the process of drawing or writing something for planning purposes.
- **drafting paper**  
[N-UNCOUNT-U12] **Drafting paper** is a type of grid paper with a hard surface used for creating architectural illustrations.
- **drafting table**  
[N-COUNT-U12] A **drafting table** is a desk with a large surface used for creating architectural blueprints and plans.
- **drafting tape**  
[N-UNCOUNT-U12] **Drafting tape** is a thin and easily removable tape which is used on drafting paper.
- **drafting triangle**  
[N-COUNT-U12] A **drafting triangle** is a right triangular tool with different scales that aids in drawing parallel lines.
- **drain**  
[N-COUNT-U1] A **drain** is a pipe that takes wastewater from one place to another.
- **drain hose**  
[N-COUNT-U5] A **drain hose** is a tube used to drain water out of an appliance.
- **drainage**  
[N-UNCOUNT-U3] **Drainage** is the process of removing excess liquids such as water or waste through a system of drains.
- **drill**  
[V-T-U5] To **drill** a hole is to make a hole in something using a tool or machine.
- **electric water heater**  
[N-COUNT-U7] An **electric water heater** is a device that warms water using electricity rather than gas.
- **electrical hook up**  
[N-COUNT-U5] An **electrical hook up** is a connection to supply power to something.

- **email**  
[N-COUNT-U10] An **email** is a message over a computer network.
- **excavate**  
[V-T-U15] To **excavate** something is to dig it up.
- **exceed**  
[V-T-U7] To **exceed** something is to go past or above it.
- **exhaust**  
[N-UNCOUNT-U6] **Exhaust** is harmful or toxic waste gases that result from the operation of gas-burning machines.
- **expensive**  
[ADJ-U7] If something is **expensive**, it costs a lot of money.
- **floor drain**  
[N-COUNT-U1] A **floor drain** is a fixture in the floor that allows water to enter a plumbing system.
- **flue pipe**  
[N-COUNT-U6] A **flue pipe** is a vent attached to a gas water heater which allows harmful gases to escape safely, such as through the roof.
- **flux**  
[N-UNCOUNT-U2] **Flux** is a paste that is used to control the application of solder.
- **forklift**  
[N-COUNT-U14] A **forklift** is a piece of machinery with prongs in front that is used to lift and move heavy objects.
- **garbage disposal**  
[N-COUNT-U4] A **garbage disposal** is a device that shreds food waste that has been washed down a sink drain.
- **gas regulator**  
[N-COUNT-U6] A **gas regulator** is part of a gas system which controls and reduces gas pressure in the system.
- **gas water heater**  
[N-COUNT-U6] A **gas water heater** is a device which heats water and is fueled by propane or another kind of gas.
- **gasket**  
[N-COUNT-U4] A **gasket** is a rubber ring that is used to seal a connection between two parts of something.
- **glue**  
[N-UNCOUNT-U2] **Glue** is a substance that bonds two things together.

- **handle**  
[V-T-U14] To **handle** something is to deal with it.
- **heating element**  
[N-COUNT-U7] A **heating element** is a device that warms water inside an electric water heater.
- **high limit**  
[N-COUNT-U7] A **high limit** is a safety device on a water heater that shuts off the energy source when temperatures get too high.
- **horsepower**  
[N-UNCOUNT-U4] **Horsepower** is a unit of measurement indicating the power of an engine.
- **hot water valve**  
[N-COUNT-U5] A **hot water valve** is a device that controls the flow of hot water through a pipe or duct.
- **hub**  
[N-COUNT-U9] A **hub** is an enlarged end of a pipe into which another pipe is inserted to connect the two.
- **icemaker**  
[N-COUNT-U9] An **icemaker** is an appliance found inside of a freezer that automatically produces ice.
- **icemaker box**  
[N-COUNT-U9] An **icemaker box** is a box installed at the termination of refrigerator piping that includes the water supply and connects the icemaker pipe to the drain.
- **illustrate**  
[V-T-U11] To **illustrate** something is to represent it visually with a picture or an image.
- **insecure**  
[ADJ-U2] If something is **insecure** it is not strong and may fall apart.
- **illustration**  
[N-COUNT-U12] An **illustration** is a detailed drawing or painting.
- **installation costs**  
[N-UNCOUNT-U8] **Installation costs** are the different monetary expenses associated with installing a new piece of equipment.
- **instantaneous**  
[ADJ-U8] If something is **instantaneous**, it is immediate or quickly appearing or acting.

- **isometric drafting**  
[N-UNCOUNT-U12] **Isometric drafting** is the process of drawing something by showing objects in three dimensions in scale from a certain angle.
- **isometric view**  
[N-COUNT-U11] An **isometric view** of a piping system is a view of the pipes presented in three dimensions.
- **knock-out plug**  
[N-COUNT-U4] A **knock-out plug** is a piece of a garbage disposal that is removed when a dishwasher connection is installed.
- **layout**  
[N-COUNT-U15] A **layout** is a plan of an area.
- **location**  
[N-COUNT-U13] A **location** is the site of a certain place.
- **manual labor**  
[N-UNCOUNT-U14] **Manual labor** is work that is done with the hands.
- **material tracking chart**  
[N-COUNT-U13] A **material tracking chart** is a document used to track items that have not been delivered yet.
- **materials list**  
[N-COUNT-U13] A **materials list** is a document that has the items needed to complete a job written on it.
- **mounting assembly**  
[N-COUNT-U4] A **mounting assembly** is a set of parts used to attach a garbage disposal to a sink drain.
- **mounting bracket**  
[N-COUNT-U5] A **mounting bracket** is a clip used to hold something in place.
- **mounting tab**  
[N-COUNT-U9] A **mounting tab** is a tab extending from one side of a washing machine box or icemaker box that fastens the box to the wall studs with nails or screws.
- **natural gas**  
[N-UNCOUNT-U6] **Natural gas** is gas that forms underground and is used as fuel.
- **on-site**  
[ADJ-U13] If something is **on-site**, it is at the place where work or activity is taking place.
- **order**  
[V-T-U13] To **order** something is to ask for something to be supplied to you.

- **p-trap**  
[N-COUNT-U3] A **p-trap** is a nonrestrictive fitting that is installed at each fixture that uses a water seal to keep sewer gases from entering a building. A p-trap does not include an integral trap, but it is sometimes referred to simply as a trap.
- **pallet**  
[N-COUNT-U13] A **pallet** is a small platform used to hold items and help with moving them.
- **pallet jack**  
[N-COUNT-U14] A **pallet jack** is a piece of machinery that is used to lift and move pallets.
- **pilot light**  
[N-COUNT-U6] A **pilot light** is a small flame which is permanently lit and is used to ignite a gas heater.
- **pipe carrier**  
[N-COUNT-U14] A **pipe carrier** is a long, rectangular box used for carrying pipes.
- **pipe cart**  
[N-COUNT-U14] A **pipe cart** is a small vehicle that is pushed and is used to move pipes.
- **pipe dope**  
[N-UNCOUNT-U2] **Pipe dope** is a compound that is used to bond threaded connections.
- **pipe route**  
[N-COUNT-U15] A **pipe route** is where pipes will be installed inside or underground.
- **pipng system**  
[N-COUNT-U11] A **pipng system** is a group of pipes connected to one another.
- **plan view**  
[N-COUNT-U11] A **plan view**, also known as a bird's-eye view, is a visual of a design shown from above.
- **plunger**  
[N-COUNT-U1] A **plunger** is the part of a PO assembly that opens and closes off the drain.
- **plunger rod**  
[N-COUNT-U1] A **plunger rod** is the object that connects the PO assembly to the plunger.
- **point-of-use water heater**  
[N-COUNT-U8] A **point-of-use water heater** provides hot water by heating water as it is needed and is often used to create hot beverages in restaurants.

- **pop-up (PO) drain**  
[N-COUNT-U1] A **pop-up (PO) drain** is the drain assembly commonly used in bathroom sinks. It allows the sink to be filled then drained.
- **pop-up rod**  
[N-COUNT-U1] A **pop-up rod** is the object that operates the plunger in a PO drain assembly.
- **port opening**  
[N-COUNT-U1] A **port opening** is the opening in an object, such as a drain. It is where different assemblies connect to the drain system.
- **post**  
[V-T-U10] To **post** something is to display it for viewing.
- **primer**  
[N-UNCOUNT-U2] A **primer** is a substance that coats a surface in preparation for being bonded to something else.
- **procure**  
[V-T-U13] To **procure** something is to get it.
- **propane**  
[N-UNCOUNT-U6] **Propane** is a gas that is formed from petroleum and natural gas refining and is used as fuel.
- **pull a string line**  
[V PHRASE-U15] To **pull a string line** is to stretch a piece of string from a wall location to determine underground pipe installation.
- **recovery rate**  
[N-COUNT-U7] A **recovery rate** is the amount of time it takes to warm water in an electric water heater.
- **review**  
[V-T-U11] To **review** something is to check that something is ok.
- **rough-in sheet**  
[N-COUNT-U10] A **rough-in sheet** is information regarding installation requirements or other unusual features of a fixture.
- **route**  
[V-T-U5] To **route** something is to send it along a certain path.
- **scale ruler**  
[N-COUNT-U12] A **scale ruler** is a ruler which has different scales used to make architectural illustrations.

- **sealant**  
[N-COUNT-U2] A **sealant** is a substance that prevents water from passing or leaking through something.
- **section view**  
[N-COUNT-U11] A **section view** is a visual representation of a piping system shown from the side.
- **shred**  
[V-T-U4] To **shred** something is to rip something into very thin pieces.
- **shredding chamber**  
[N-COUNT-U4] A **shredding chamber** is the part of a garbage disposal where food waste is shredded.
- **sink flange**  
[N-COUNT-U4] A **sink flange** is the part of a mounting assembly that is fitted into the sink drain.
- **sketch**  
[N-COUNT-U12] A **sketch** is a quickly drawn picture which only shows the main details or outlines.
- **sketch**  
[V-T-U12] To **sketch** something is to draw it quickly or represent only its main details.
- **smartphone**  
[N-COUNT-U10] A **smartphone** is a mobile phone with computer-like capabilities.
- **solar collector**  
[N-COUNT-U8] A **solar collector** is a panel which absorbs sunlight and converts it into energy.
- **solar water heater**  
[N-COUNT-U8] A **solar water heater** is a water heater which works using energy from the sun.
- **solder**  
[N-UNCOUNT-U2] **Solder** is a metal compound that is used to join something.
- **solder**  
[V-T-U2] To **solder** something is to join something with a metal compound.
- **solvent-welding**  
[N-UNCOUNT-U2] **Solvent-welding** is a process for fusing something together with chemicals.
- **stack vent**  
[N-COUNT-U3] A **stack vent** is a vertical pipe that connects to a waste stack and ends in open air or connects to another vent.

- **storage tank**  
[N-COUNT-U7] A **storage tank** is a large container in which water is kept.
- **store**  
[V-T-U13] To **store** something is to keep it with the intent to use it at a later date.
- **strainer**  
[N-COUNT-U1] A **strainer** is the top part of the drain that keeps objects from entering the drain system.
- **strapping**  
[N-COUNT-U5] A **strapping** is a thin piece of metal used to hold pipes in place.
- **tankless water heater**  
[N-COUNT-U8] A **tankless water heater** provides instant hot water on an as-needed basis by heating pipes rather than a large tank.
- **Teflon tape**  
[N-UNCOUNT-U2] **Teflon tape** is a sealant that is used to bond threaded connections.
- **temperature rise**  
[N-UNCOUNT-U7] **Temperature rise** is the difference between the cold water that enters a water heater and the temperature that the heater is set to warm the water to.
- **thermocouple**  
[N-COUNT-U6] A **thermocouple** is a device that detects heat from a flame. If a pilot light flame is not detected, a thermocouple shuts off the gas supply.
- **thermostat**  
[N-COUNT-U7] A **thermostat** is a device that controls the temperature of a water heater or other object.
- **torch**  
[N-COUNT-U2] A **torch** is a tool that provides heat for soldering.
- **transport**  
[V-T-U14] To **transport** something is to move it from one place to another.
- **trap**  
[N-COUNT-U3] A **trap** is a nonrestrictive fitting that is installed at each fixture that uses a water seal to keep sewer gases from entering a building.
- **trench**  
[N-COUNT-U15] A **trench** is a dug up space in the ground where pipes will be installed.



- **trench layout**  
[N-COUNT-U15] A **trench layout** is a plan showing where the ground will be dug up to install pipes.
- **trim out phase**  
[N-COUNT-U5] The **trim out phase** is when fixtures and appliances are installed during construction.
- **two-way radio**  
[N-COUNT-U10] A **two-way radio** is a device that can send out and receive spoken messages.
- **underground layout**  
[N-COUNT-U15] An **underground layout** is a plan of the area beneath the surface.
- **vacuum**  
[N-COUNT-U3] A **vacuum** is a space from which all matter is removed, usually by a pump.
- **vehicle rack**  
[N-COUNT-U14] A **vehicle rack** is a basket attached to a piece of machinery and is used for carrying materials and equipment .
- **vent**  
[N-COUNT-U3] A **vent** is a pipe used to provide airflow so a drainage system can breathe.
- **vent stack**  
[N-COUNT-U3] A **vent stack** is a vertical vent pipe that connects to vents and ends in the open air or connects to a stack vent.
- **venting**  
[N-UNCOUNT-U7] **Venting** is a system of pipes and openings that allow air to flow.
- **volume**  
[N-UNCOUNT-U8] **Volume** is the measurement of space inside a container.
- **wall layout**  
[N-COUNT-U15] A **wall layout** is a plan that shows where the walls of a structure will be located.
- **wall stud**  
[N-COUNT-U9] A **wall stud** is a vertical board made of wood or another material used to build a wall.
- **wall trim**  
[N-UNCOUNT-U9] **Wall trim** is material used to finish a wall after it has been cut or altered to install a device.

- **warehouse**  
[N-COUNT-U13] A **warehouse** is a large building where items are kept before they are sold.
- **washing machine**  
[N-COUNT-U9] A **washing machine** is a household appliance used to clean clothing, towels, and linens.
- **washing machine box**  
[N-COUNT-U9] A **washing machine box** is a box containing the handles for hot water and cold water, as well as a pipe connecting the washing machine to the drain.
- **waste**  
[N-UNCOUNT-U4] **Waste** is unwanted or leftover material.
- **waste stack**  
[N-COUNT-U3] A **waste stack** is a vertical pipe that only transports wastewater.
- **wastewater**  
[N-UNCOUNT-U3] **Wastewater** is contaminated water that contains sewage.
- **water dispenser**  
[N-COUNT-U9] A **water dispenser** is a feature of some refrigerators that cools and releases water.
- **weight capacity**  
[U-UNCOUNT-U14] **Weight capacity** is how much weight something can safely hold.
- **weir**  
[N-COUNT-U3] A **weir** is the point at which a horizontal pipe enters the wall and the water enters the connecting horizontal drain.
- **work order**  
[N-COUNT-U10] A **work order** is a written authorization to do a job.

### Book 3

- **above-ground pump**  
[N-COUNT-U12] An **above-ground pump** is a pump system for a well located above ground or away from the well.
- **activation temperature**  
[N-COUNT-U1] An **activation temperature** is the point at which the temperature is high enough to set off a sprinkler system.
- **active fire prevention**  
[N-UNCOUNT-U1] **Active fire prevention** is a method of controlling and stopping fires using moving objects and devices.

- **adhesive latex caulk**  
[N-UNCOUNT-U7] **Adhesive latex caulk** is a substance used to seal the edges of a sink to a countertop.
- **alignment**  
[N-UNCOUNT-U12] **Alignment** is the state of parts being adjusted so that they are in the correct position.
- **auger**  
[N-COUNT-U10] An **auger** is a tool used to remove materials from a pipe.
- **back up**  
[N-COUNT-U13] A **back up** is a situation that occurs when a pipe system becomes clogged and material is pushed back toward where it came from.
- **backfill**  
[N-UNCOUNT-U3] **Backfill** is loose soil that is placed into a dug-out area to fill it up.
- **ball float**  
[N-COUNT-U9] A **ball float** is a hollow, sealed ball that floats on the water surface in a toilet tank and triggers the fill valve to start or stop the flow of water.
- **ballcock**  
[N-COUNT-U9] A **ballcock**, also called a fill valve, is a mechanism that controls the water level in a toilet tank.
- **ball-type faucet**  
[N-COUNT-U11] A **ball-type faucet** is a faucet with a single handle that moves over a ball-shaped cap above the base of the spout.
- **blockage**  
[N-COUNT-U10] A **blockage** is an obstruction in a drain or other piping system.
- **bolt**  
[N-COUNT-U6] A **bolt** is a metal rod that is inserted through a hole and secured with a nut on the other side, used to fasten two objects together such as a toilet tank and toilet bowl.
- **bowl**  
[N-COUNT-U6] A toilet **bowl** is the bottom piece of the toilet into which waste is deposited and then flushed with water.
- **braided-stainless-steel**  
[N-UNCOUNT-U14] **Braided-stainless-steel** is a strong, flexible material used in some tubes and hoses.

- **branch vent**  
[N-COUNT-U5] A **branch vent** is a vent that connects one or more individual vents with a stack.
- **break down**  
[V-I-T-U13] To **break down** is to separate into pieces or component parts.
- **build-up**  
[N-UNCOUNT-U15] **Build-up** is the increased presence of a substance in a particular place.
- **burial-depth**  
[N-UNCOUNT-U3] **Burial-depth** refers to how deep underground a pipe is placed.
- **burr**  
[N-COUNT-U14] A **burr** is a rough edge on a piece of metal.
- **cable auger**  
[N-COUNT-U10] A **cable auger** is a tool for clearing obstructions in a drain system. It consists of a coiled flexible cable with a corkscrew tip and a cranking device to extend it spinning through the system to push or pull the obstruction out of place.
- **cam washer**  
[N-COUNT-U11] A **cam washer** is a small metal ring found near the ball in a ball-type faucet.
- **cartridge faucet**  
[N-COUNT-U11] A **cartridge faucet** is a faucet with a cartridge that moves up and down to control the flow of water.
- **cast iron**  
[N-UNCOUNT-U7] **Cast iron** is a combination of iron, carbon, and silicon that is made into shapes using a mold.
- **caulk**  
[N-UNCOUNT-U6] **Caulk** is a substance used to create a waterproof seal, such as between the base of a toilet and the floor.
- **ceramic disc faucet**  
[N-COUNT-U11] A **ceramic disc faucet** is a faucet with a single lever over a tall, round body.
- **chain**  
[N-COUNT-U9] A **chain** is a metal part that connects a toilet's tank handle to the tank flapper so that the flapper is lifted when the handle is pressed.
- **chamber**  
[N-COUNT-U2] A **chamber** is an enclosed space.



- **circuit breaker**  
[N-COUNT-U15] A **circuit breaker** is a device that stops an electrical current that has become too strong and might be dangerous.
- **circuit vent**  
[N-COUNT-U5] A **circuit vent** is a vent that connects to between two and eight fixture traps.
- **clear**  
[V-T-U10] To **clear** a piping system is to remove obstructions from it.
- **clearance**  
[N-UNCOUNT-U8] **Clearance** is the amount of space by which one metal is separated from another to prevent combustion.
- **clog**  
[N-COUNT-U10] A **clog** is an obstruction that prevents water from flowing through a drain system.
- **close-couple gasket**  
[N-COUNT-U9] A **close-couple gasket** is a piece that prevents leaks around the connection between a toilet's tank and bowl.
- **closet (toilet) flange**  
[N-COUNT-U6] A **closet (toilet) flange** is a pipe fitting to which a toilet is bolted to mount it to the floor and that connects the toilet drain to a drain pipe.
- **closet auger**  
[N-COUNT-U10] A **closet auger** is a tool for clearing clogs within the first few feet of a drain system. It consists of a short flexible cable with a corkscrew tip that extends from a J-shaped metal handle.
- **closet bolt**  
[N-COUNT-U6] A **closet bolt** is a bolt used to secure the toilet to the floor by fastening it to the flange.
- **compression coupling connection**  
[N-COUNT-U7] A **compression coupling connection** is a soft metal ring that is pressed onto a pipe and covered by a metal nut.
- **compression faucet**  
[N-COUNT-U11] A **compression faucet** is a faucet that requires the user to tighten the handles to cut off water flow.
- **continuous waste**  
[N-UNCOUNT-U7] **Continuous waste** is a drainage assembly that connects a two-bowl kitchen sink to one p-trap.

- **corrosion**  
[N-UNCOUNT-U14] **Corrosion** is the process of gradually breaking down or weakening something through a chemical process.
- **crank**  
[V-T-U10] To **crank** something is to turn its handle in order to work its moving parts.
- **defective**  
[ADJ-U15] If something is **defective**, it has a flaw that prevents it from functioning properly.
- **deluge system**  
[N-COUNT-U1] A **deluge system** is a fire sprinkler system in which all sprinklers open at once.
- **dielectric union**  
[N-COUNT-U8] A **dielectric union** is a type of connector used to insulate two different types of metal to prevent electrolysis.
- **disconnect**  
[V-T-U15] To **disconnect** something is to stop supplying power to it.
- **disposal**  
[N-UNCOUNT-U13] **Disposal** is the process of dealing with unwanted materials.
- **drainage fixture unit**  
[N-COUNT-U5] A **drainage fixture unit (dfu)** is a unit of measurement equal to the liters per second of water flow into a drainage system.
- **drainpipe**  
[N-COUNT-U10] A **drainpipe** is a pipe through which drain water flows from a sink, toilet, or other drain to sewerage or gutter system.
- **drilling**  
[N-UNCOUNT-U4] **Drilling** is the process of making a hole in a wall to insert a pipe or other object.
- **drip leg**  
[N-COUNT-U8] A **drip leg** is a piece installed to collect any unwanted moisture in the gas supply system of a water heater.
- **dry pipe system**  
[N-COUNT-U1] A **dry pipe system** is a fire sprinkler system where water is not present in the pipes before activation, due to a cold environment outside that could freeze it.
- **effluent**  
[N-UNCOUNT-U2] **Effluent** is liquid waste.

- **electric power auger**  
[N-COUNT-U10] An **electric power auger** is a heavy duty, electric-powered tool for clearing obstructions in a larger drain system.
- **electrolysis**  
[N-UNCOUNT-U8] **Electrolysis** is the corrosion that occurs when two unlike metals are connected.
- **emit**  
[V-T-U1] To **emit** something is to give off something e.g. a gas or a liquid.
- **estimate**  
[N-COUNT-U7] An **estimate** is how much someone thinks something will cost to do, before they do it.
- **evaporation**  
[N-UNCOUNT-U13] **Evaporation** is the process by which liquid changes to vapor.
- **exceed**  
[V-T or I-U13] To **exceed** a standard or limit is to go beyond the given amount.
- **excess**  
[N-UNCOUNT-U7] An **excess** is more than what is needed or usual.
- **expansion tank**  
[N-COUNT-U8] An **expansion tank** is a device that absorbs water which expands after being heated.
- **extinguish**  
[V-T-U3] To **extinguish** a fire is to stop something burning.
- **fastening clip**  
[N-COUNT-U7] A **fastening clip** is a small, metal device that holds a sink in place with a screw.
- **faucet**  
[N-COUNT-U11] A **faucet** is something that delivers water into a sink, bathtub etc.
- **faulty**  
[ADJ-U12] If something is **faulty**, it is broken or not working properly.
- **ferrule**  
[N-COUNT-U14] A **ferrule** is a metal ring that secures pipe ends.
- **fill valve**  
[N-COUNT-U9] A **fill valve**, also called a ballcock, is a mechanism that controls the water level in a toilet tank.

- **finished area**  
[N-COUNT-U8] A **finished area** is a part of a business or residence with a floor that has been treated or prepared for daily use.
- **fire extinguisher**  
[N-COUNT-U1] A **fire extinguisher** is a handheld device used to control or stop small fires in an emergency.
- **fire sprinkler**  
[N-COUNT-U1] A **fire sprinkler** is a device that sprays water when a fire has been detected.
- **fire-suppression system**  
[N-COUNT-U1] A **fire-suppression system** is a system that uses sprinklers, chemicals, and gases to stop fires.
- **fixture**  
[N-COUNT-U5] A **fixture** is something inside a house that does not move e.g a sink, toilet etc.
- **fixture branch**  
[N-COUNT-U5] A **fixture branch** is a pipe that drains two or more fixture drains into a stack or another drain.
- **flood**  
[N-COUNT-U4] A **flood** is a very large amount of unwanted water in a building.
- **floor penetration**  
[N-UNCOUNT-U4] **Floor penetration** is the penetration of a pipe up through a section of a floor.
- **flush**  
[V-T-U9] To **flush** something is to clean something by moving water through it.
- **flush valve**  
[N-COUNT-U9] A **flush valve** is an opening where water passes from a toilet's tank into the bowl.
- **foam water sprinkler system**  
[N-COUNT-U1] A **foam water sprinkler system** is a special fire sprinkler system that applies water and foam, used to put out tough fires involving flammable liquids.
- **foot valve**  
[N-COUNT-U12] A **foot valve** is a device in a well that ensures water in the pipes does not flow back into the well.
- **fumes**  
[N-PLURAL-U15] **Fumes** are gases or smells in the air.

- **fusible alloy**  
[N-COUNT-U1] A **fusible alloy** is a metal that will melt at a low temperature.
- **gallonage**  
[N-UNCOUNT-U13] **Gallonage** is a capacity measured in gallons. One gallon equals 3.78 liters.
- **gas regulator**  
[N-COUNT-U15] A **gas regulator** is a part of a gas water heater that controls gas flow.
- **gas supply pipe**  
[N-COUNT-U8] A **gas supply pipe** is a pipe that carries gas from its source to the water heater.
- **glass bulb**  
[N-COUNT-U1] A **glass bulb** is a part of a fire sprinkler that reacts when the outside temperature gets too hot.
- **grease**  
[N-UNCOUNT-U13] **Grease** is an oily substance used as a lubricant.
- **hatch**  
[N-COUNT-U2] A **hatch** is a small door or opening.
- **heat**  
[N-UNCOUNT-U1] **Heat** is energy that is typically associated with high temperatures.
- **heat sensitive element**  
[N-COUNT-U1] A **heat sensitive element** is a metal whose properties change as it gets hotter.
- **horizontal branch**  
[N-COUNT-U5] A **horizontal branch** is a pipe that connects two or more fixture drains to the main portion of a system.
- **impeller**  
[N-COUNT-U12] An **impeller** is a rotor inside a tube that is used to increase the pressure and flow of water.
- **incoming**  
[ADJ-U3] If a water connection is **incoming**, it is flowing into a building.
- **individual vent**  
[N-COUNT-U5] An **individual vent** is a vent that connects a fixture trap to another vent or ends in open air.
- **in-wall**  
[ADJ-U4] If something is **in-wall**, it is contained inside of a wall.

- **island venting**  
[N-UNCOUNT-U5] **Island venting** is a special kind of venting often used to serve a kitchen sink that is away from a wall.
- **lavatory supply**  
[N-COUNT-U7] A **lavatory supply** is a tube that connects a water supply to a sink.
- **leach field**  
[N-COUNT-U2] A **leach field** is an area near a septic tank where waste is drained through pipes and allowed to absorb into the ground.
- **leach pit**  
[N-COUNT-U2] A **leach pit** is a hole where treated waste from a septic system is deposited so the waste can be absorbed into the ground.
- **leak**  
[N-COUNT-U9] A **leak** is an unwanted flow of water from a fixture.
- **leg**  
[N-COUNT-U15] A **leg** is a wire that carries electricity to a water heater.
- **limit**  
[N-COUNT-U13] A **limit** is a boundary that is not to be exceeded.
- **line voltage**  
[N-COUNT-U15] A **line voltage** is a wire that is connected to the switch that disconnects a water heater in case of excessive heat.
- **load bearing**  
[ADJ-U4] If a wall is **load bearing**, it supports the weight of a building.
- **loop vent**  
[N-COUNT-U5] A **loop vent** is a vent that ends by connecting to a stack vent instead of a vent stack.
- **maintenance**  
[N-UNCOUNT-U13] **Maintenance** is the process of keeping a system in proper working condition.
- **maximum**  
[N-COUNT-U4] A **maximum** is the highest or greatest possible amount of something.
- **mineral deposits**  
[N-PLURAL-U11] **Mineral deposits** are small pieces of iron and other materials.
- **minimum**  
[N-COUNT-U4] A **minimum** is the least possible amount of something.

- **non-corrosive**  
[ADJ-U6] If a bolt is **non-corrosive**, it is made of material that will not easily wear away or erode.
- **non-load bearing**  
[ADJ-U4] If something is **non-load bearing**, it does not support the weight of a building.
- **notching**  
[N-UNCOUNT-U4] **Notching** is the process of making a cut in wooden board in order to fit or attach it to something else.
- **obstruction**  
[N-COUNT-U12] An **obstruction** is an obstacle that blocks a pipe.
- **odor**  
[N-COUNT-U15] An **odor** is a strong and often unpleasant smell.
- **one-piece**  
[N-COUNT-U6] A **one-piece** toilet is a toilet that is sold as one solid entity comprised of a tank and a bowl.
- **on-site sewage facility**  
[N-COUNT-U2] An **on-site sewage facility** is a waste system used to process waste at the same place the waste is produced.
- **O-ring**  
[N-COUNT-U11] An **O-ring** is a rubber circular band used to create a seal between two parts.
- **outgoing**  
[ADJ-U3] If a water connection is **outgoing**, it is flowing out of a building.
- **overflow/fill tube**  
[N-COUNT-U9] An **overflow/fill tube** is a drain that catches excess water in the toilet tank to prevent it from overflowing.
- **overlap**  
[N-COUNT-U14] **Overlap** is an area where the edges of two things cross over each other.
- **patch**  
[V-T-U14] To **patch** something is to put a material over a hole to stop it leaking.
- **percolate**  
[V-T-U2] To **percolate** is to filter a fluid by passing it through a porous material.
- **pinch**  
[V-T-U14] To **pinch** something is to press two parts tightly together around it.
- **pinhole**  
[N-COUNT-U14] A **pinhole** is a very small leak in a pipe that is often the beginning of a larger leak.

- **pipe repair clamp**  
[N-COUNT-U14] A **pipe repair clamp** is a device that is secured firmly around a pipe to stop a leak.
- **pipe sizing**  
[N-UNCOUNT-U4] **Pipe sizing** refers to the process of finding and using the appropriate size of pipes throughout a building to connect to fixtures.
- **plugged**  
[ADJ-U12] If something is **plugged**, it is blocked by something and prevented from working properly.
- **plumber's snake**  
[N-COUNT-U10] A **plumber's snake** is the same as a cable auger.
- **plumber's grease**  
[N-UNCOUNT-U11] **Plumber's grease** is a slick substance applied in faucets to provide lubrication.
- **plunger**  
[N-COUNT-U10] A **plunger** is a tool for unclogging a drain system that consists of a rubber cup and a handle.
- **pool**  
[V-I-U13] To **pool** is to accumulate in one area to form a puddle of standing liquid.
- **position**  
[V-T-U8] To **position** something is to situate it in a particular place.
- **pre-molded**  
[ADJ-U7] If a sink is **pre-molded**, it is made standard-size in a factory.
- **pressure switch**  
[N-COUNT-U12] A **pressure switch** is a device that controls a pump system by supplying electricity when the pressure in a piping system reaches certain levels.
- **pump**  
[V-T-U13] To **pump** a liquid or gas is to cause the material to move or flow in one direction.
- **pump house**  
[N-COUNT-U12] A **pump house** is a small building or compartment that contains a pump system.
- **relief vent**  
[N-COUNT-U5] A **relief vent** is a pipe that circulates air between drainage and vent systems.

- **reset button**

[N-COUNT-U15] A **reset button** is a button that turns an electric water heater on again after it has shut off from excessive heat.

- **retainer clip**

[N-COUNT-U15] A **retainer clip** is a part that holds a thermostat in place against the surface of a water heater tank.

- **rim**

[N-COUNT-U9] A **rim** is a part around the edges of a toilet that overhangs the inside of the bowl.

- **rim holes**

[N-COUNT-U9] **Rim holes** are openings in a toilet rim where water passes from the flush valve into the bowl.

- **root**

[N-COUNT-U13] A **root** is an extension of a plant that is anchored underground, providing nourishment and water to the rest of the plant.

- **rubber gasket**

[N-COUNT-U6] A **rubber gasket** is a small piece of rubber inserted at a juncture between two objects to act as a watertight seal.

- **safety guard**

[N-COUNT-U15] A **safety guard** is a plastic piece around a thermostat on a water heater that reduces the risk of electric shock.

- **safety pan**

[N-COUNT-U8] A **safety pan** is a pan used to collect water released or leaked from a water heater.

- **sandpaper**

[N-UNCOUNT-U14] **Sandpaper** is rough paper that is rubbed against a surface to make it smooth.

- **saturate**

[V-T-U13] To **saturate** is to soak something thoroughly.

- **scouring pad**

[N-COUNT-U11] A **scouring pad** is a small, rough object used in cleaning.

- **scrap**

[N-COUNT-U13] A piece of **scrap** is an excess piece of material.

- **scum**

[N-UNCOUNT-U2] **Scum** is dirt or waste materials found on the surface of a liquid.

- **seal**

[V-T-U6] To **seal** something is to stop things, e.g. water, from getting in and out of something.

- **seat washer**

[N-COUNT-U11] A **seat washer** is a small metal ring found in the base of a compression faucet.

- **secure**

[V-T-U6] To **secure** an object is to fasten it to another object firmly such that the two parts are unlikely to separate.

- **sediment**

[N-UNCOUNT-U2] **Sediment** is a substance that forms at the bottom of a liquid.

- **septic system**

[N-COUNT-U2] A **septic system** is a small scale sewage treatment system often used in rural areas.

- **septic tank**

[N-COUNT-U2] A **septic tank** is a container that processes sewage. It is part of a septic system.

- **service panel**

[N-COUNT-U8] A **service panel** is an access point that allows a water heater to be fixed/maintained.

- **settle**

[V-I-U2] To **settle** is to sink in liquid to the bottom of a container.

- **sewage**

[N-UNCOUNT-U2] **Sewage** is liquid or solid waste that is transported by pipes.

- **sizing calculations**

[N-COUNT-U4] **Sizing calculations** are mathematical processes used to determine the correct size for a pipe that connects to a fixture.

- **sleeve**

[N-COUNT-U3] A **sleeve** is a passage through a wall that allows an external pipe to connect to a pipe inside a house.

- **slip joint**

[N-COUNT-U7] A **slip joint** is a connection between a tube shaped p-trap and a rough-in stub out.

- **smoke alarm**

[N-COUNT-U1] A **smoke alarm** is an alarm which starts when it detects smoke.

- **solution**  
[N-COUNT-U8] A **solution** is a uniform mixture of two or more substances.
- **splice**  
[V-T-U14] To **splice** something is to insert it to join the two sides of an object.
- **split**  
[ADJ-U14] If something is **split**, it has developed a crack or breakage.
- **stainless steel**  
[N-UNCOUNT-U7] **Stainless steel** is steel that has been combined with other metals making it resistant to rust.
- **stub out**  
[N-COUNT-U4] A **stub out** is a pipe that connects to a fixture before the final phase of construction.
- **submersible pump**  
[N-COUNT-U12] A **submersible pump** is a pump system that is under water in a well to provide water from the well to a piping system.
- **tank**  
[N-COUNT-U6] A **tank** is the top portion of a toilet that contains the water supply that is released into the toilet bowl upon flushing.
- **tank flapper**  
[N-COUNT-U9] A **tank flapper** is a plastic piece that seals the flush valve between a toilet's tank and bowl. It is lifted during flushing.
- **tank handle**  
[N-COUNT-U9] A **tank handle** is the part of a toilet that is pressed to trigger the flushing mechanism.
- **tank supply**  
[N-COUNT-U6] A **tank supply** is a chrome-finished copper tubing that connects to a fill valve necessary for a toilet's water connection.
- **tank-to-bowl gasket**  
[N-COUNT-U6] A **tank-to-bowl gasket** is a foam-rubber gasket used to keep water that leaves the toilet tank and enters the toilet bowl from leaking.
- **temperature regulation system**  
[N-COUNT-U15] A **temperature regulation system** is a system that controls the temperature of a building.

- **termination point**  
[N-COUNT-U8] A **termination point** is the place at which one pipe ends, either in open air or by connecting to another pipe or drain.
- **trap adapter**  
[N-COUNT-U7] A **trap adapter** is a fitting that connects a stub-out pipe to a p-trap.
- **trench safety**  
[N-UNCOUNT-U3] **Trench safety** is the series of steps workers must take while working in a trench or ditch to make sure they are protected.
- **trickle**  
[N-COUNT-U9] A **trickle** is a very small amount of liquid coming out of a fixture.
- **trickle indicator**  
[N-COUNT-U3] A **trickle indicator** is a device used to tell if there is a leak in a water system.
- **trigger**  
[V-T-U1] To **trigger** something is to set it off or activate it.
- **two-piece**  
[N-COUNT-U6] A **two-piece** toilet is a toilet that is sold in two parts (the bowl and the tank) which the buyer must assemble.
- **volt**  
[N-COUNT-U15] A **volt** is a unit of electrical potential.
- **wall penetration**  
[N-UNCOUNT-U4] **Wall penetration** refers to pipe going through a section of a wall.
- **watertight**  
[ADJ-U6] If something is **watertight**, it does not allow water to pass through it.
- **water distribution system**  
[N-COUNT-U4] A **water distribution system** is a series of pipes that allow hot and cold water to flow throughout a building.
- **water main**  
[N-COUNT-U3] A **water main** is a group of pipes that delivers fresh water to buildings.
- **water meter**  
[N-COUNT-U3] A **water meter** is a device used to measure how much water has been used in a building.
- **water service**  
[N-UNCOUNT-U3] **Water service** is piping outside a building that connects a cold water source to the water piping inside a building.



- **water service pipe**

[N-COUNT-U3] A **water service pipe** is a tube made of plastic, steel, iron, or other material that carries water into a building.

- **wet pipe system**

[N-COUNT-U1] A **wet pipe system** is a common fire sprinkler system with water inside its pipes that is released when the system is triggered.

- **wet venting**

[N-UNCOUNT-U5] **Wet venting** is an arrangement of pipes which uses a single vent for more than one fixture.



## Audio Files for Occupations COOLING, HEATING AND CLIMATIZATION and PLUMBING AND HEATING

All audio files accompanying the resources proposed for application for teaching foreign language for the occupations COOLING, HEATING AND CLIMATIZATION and PLUMBING AND HEATING are freely available at the Resource centres equipped under the *Curriculum Development in Vocational Education and Training Schools* Project.

