

**МІНІСТЕРСТВО УКРАЇНИ З ПИТАНЬ НАДЗВИЧАЙНИХ СИТУАЦІЙ
ТА У СПРАВАХ ЗАХИСТУ НАСЕЛЕННЯ
ВІД НАСЛІДКІВ ЧОРНОБИЛЬСЬКОЇ КАТАСТРОФИ**

УНІВЕРСИТЕТ ЦИВІЛЬНОГО ЗАХИСТУ УКРАЇНИ

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**АНГЛІЙСЬКА МОВА
ЗА ПРОФЕСІЙНИМ
СПРЯМУВАННЯМ
ДЛЯ ВИЩИХ НАВЧАЛЬНИХ
ЗАКЛАДІВ СИСТЕМИ МНС**

*Навчальний посібник
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А 64 **Англійська мова за професійним спрямуванням для вищих навчальних закладів системи МНС: Навчальний посібник.** – 2-е видання / За заг. ред. І.Є. Богданової. – Харків: УЦЗУ, 2008. – 151 с.

Навчальний посібник спрямований на підготовку студентів та курсантів, які навчаються у вищих навчальних закладах за спеціальностями "Пожежна безпека" та "Цивільний захист". Посібник містить фахові тексти, завдання до них, лексичні та комунікативні вправи, поурочний термінологічний словник, граматичний довідник. Тексти посібника відображають спектр тематики, що вивчається студентами та курсантами протягом навчання у ВНЗ системи МНС і передбачені навчальною програмою викладання дисципліни "Англійська мова за професійним спрямуванням".

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ВІД АВТОРІВ

Навчальний посібник адресовано студентам вищих навчальних закладів системи Міністерства України з питань надзвичайних ситуацій та у справах захисту населення від наслідків Чорнобильської катастрофи, які навчаються за спеціальностями "Пожежна безпека" та "Цивільний захист". Він розрахований на слухачів, що мають достатній рівень володіння англійською мовою в обсязі, передбаченому шкільною програмою.

Мета даного посібника – допомогти оволодіти студентам та курсантам як навичками перекладу технічних текстів фахового спрямування, так і здобути навички усного і письмового спілкування у сфері свого фаху. Навчальна програма викладання дисципліни "Англійська мова за професійним спрямуванням" передбачає формування професійної мовної компетенції – тобто мовної компетенції, пов'язаної з фахом студента. Формування і розвиток професійної компетенції пропонується реалізувати за допомогою фахових текстів, з яких складаються тематичні розділи посібника, і шляхом виконання вправ до них.

Своєю структурою посібник послідовно відображає шлях пізнання професії, обраної студентом. Тематичні розділи відображають основні поняття спеціальностей "Пожежна безпека" та "Цивільний захист", охоплюючи питання історії розвитку пожежної та аварійно-рятувальної справи, основ пожежної та техногенної безпеки, початкових знань процесів горіння, методів профілактики пожеж і надзвичайних ситуацій. Основним методичним принципом посібника виступає моделювання на базі отриманих лексичних знань типових комунікативних ситуацій професійного спілкування, врахування відмінностей української аварійно-рятувальної термінології від англійської, поетапність формування мовленнєвих умінь і комплексність мовного матеріалу.

Посібник складається з 14 тематичних розділів, поурочного словника, граматичного довідника. Кожен з розділів складається з підрозділів, які відображають етапи формування мовних і мовленнєвих умінь: Reading and Speaking, Vocabulary in Use, Grammar in Use, Discussion. Розділ починається презентацією теми (передтекстовий етап роботи і завдання до нього). Тема розділу висвітлюється оригінальними текстами, до яких у поурочному словнику подається тематично згрупований список

лексичних одиниць. Після читання і перекладу текстів, розуміння прочитаного перевіряється або питаннями до текстів, або вправами іншого виду (виконати тест, дописати питання до тексту). Робота з лексичним матеріалом розділу передбачає виконання тренувальних і творчих вправ. Вправи підрозділу *Vocabulary in Use* - це вправи на переклад, підстановку, трансформацію, пошук аналогії. Одночасно з лексичним матеріалом у посібнику розглядаються й граматичні теми. Опрацювання граматичних відомостей здійснюється через виконання завдань підрозділу *Grammar in Use*, у яких студенту пропонуються вправи на переклад та трансформацію. Граматичний довідник укладено відповідно до матеріалу, який розглядається у розділах. Навчальний посібник містить якісно нові вправи – рольові та проблемні ситуації, які представлені у підрозділах *Discussion*, присвячених усному спілкуванню. У цих підрозділах здійснюється робота з мовними зразками, пропонується укладання ситуативних діалогів, побудованих на засвоєному матеріалі усього розділу.

На допомогу студенту і викладачеві у перевірці засвоєного лексичного та граматичного матеріалу подано окремі розділи *Checking Tasks*. Контроль вивченого матеріалу здійснюється шляхом виконання завдань цього розділу. Завдання охоплюють декілька тематичних розділів і виступають логічним завершенням певного циклу тем, що дозволяє використовувати їх у якості модульного контролю.

Поступово, від розділу до розділу обсяг професійних термінів та тем, пов'язаних з майбутнім фахом, збільшується, що дозволяє органічно готувати студента до використання набутих знань на практиці.

Тексти навчального посібника відображають спектр тематики, що вивчається студентами протягом навчання у ВНЗ системи МНС і містять фахову термінологію та специфічну лексику технічного напрямку. Розділ посібника розраховано на 6-10 академічних годин, у залежності від рівня підготовки студентів, що дозволяє диференційовано підходити до процесу викладання дисципліни і використовувати посібник як під час аудиторних занять, так і для самостійної роботи. Бажаємо успіхів!

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UNIT 1

ENGLISH AS A WORLD LANGUAGE

Reading and speaking

Pre-reading activity

1. Do you know that...

- ... English has the largest vocabulary with approximately 500 000 words and 300 000 technical terms?
- ... 85% of the world's mail and 90% of the world's telephone calls are in English?
- ... 400 million people speak English?
- ... the oldest written language is Egyptian?
- ... Indian sub-continent has the largest number of languages — 845?
- ... Cambodian has the most letters in its alphabet — 72?
- ... the largest encyclopedia is printed in Spanish?
- ... it took the French Academy 297 years to write a book of 263 pages?
- ... there are eight million speakers of Esperanto in the world?
- ... by 2010 the number of people who speak English will exceed the number of native speakers?

2. Countries Where English Is Spoken

	1.				2.		
3.							4.
				5.			
				6.			
7.							

Across

1. European country whose capital is London.

5. African country whose capital is Nairobi.
7. Nation which is also a continent.

Down

2. Mr. Clinton's country.
3. See 6 down.
4. Where both English and French are spoken.
6. (with 3 down) Mr. Mandela's country.

JIGSAW READING

1. Get into three groups:

Group A is to read text 1.

Group B is to read text 2.

2. Read and translate the texts.

Text 1

English as a World Language

Today, when English is one of the major languages in the world, it requires an effort of the imagination to realize that this is a relatively recent thing - that in Shakespeare's time, for example, only a few million people spoke English, and the language was not thought to be very important by the other nations of Europe, and was unknown to the rest of the world.

English has become a world language because of its establishment as a mother tongue outside England, in all the continents of the world. This exporting of English began in the seventeenth century, with the first settlements in North America. Above all, it is the great growth of population in the United States, assisted by massive immigration in the nineteenth and twentieth centuries that has given the English language its present standing in the world.

People who *speak* English fall into one of three groups: those who have learned it as their native language; those who have learned it as a second language in a society that is mainly bilingual; and those who are forced to use it for a practical purpose - administrative, professional or educational. One person in seven of the world's entire population belongs to one of these

three groups.

Three hundred million people speak English as their native language. English is their first language. They live in countries such as Britain, The United States of America, Canada, Australia and New Zealand.

Six hundred million people use English as an official, second language. They live in countries such as India, Pakistan and Nigeria.

But at least one hundred million people now study English as a foreign language. They live in countries such as Spain, Greece, Portugal, Mexico, Brazil, Argentina, China, Russia and Poland - in fact, almost everywhere.

Incredibly enough, 75% of the world's mail and 60% of the world's telephone calls are in English. Therefore, at least one thousand million people can speak, read, write and understand English today.

Text 2

Human language is, perhaps, the most astonishing creation of man. It helps us understand each other. We make use of it in practically everything we do.

Language is a means of communication in human society. People can use other means of communication, such as red lights and flags, but these signs are interpreted into human language. So language is the normal form and the main means of communication in human society.

We cannot say anything definite about the origin of language. But we realize now that language is a product of human society and it can exist only in human society.

Man ("homo sapiens") is the only living being with the power of speech. The appearance of language on our planet is as recent as the appearance of man himself. Labour and language are distinctive and exclusive marks of human being. Without them the growth and progress of human society is unthinkable.

Primitive people had a few hundred words at the most. Today highly cultured nations have more than seven hundred thousand words in their dictionaries. This means that now people can communicate by words much better than they did it in the remote past. The rapid growth of the vocabulary of modern languages is due to the development of science and technology.

But spoken languages were easy to forget; so people invented writing to record them. Writing is a way of recording language by means of visible marks. The first form of writing was picture writing. Symbols representing the sound of a language appeared much later. The art of writing made it possible to fix thoughts and to store knowledge, and to pass them on from one generation to another.

There are people who know three, five or six languages. They are polyglots. They study languages because knowledge of languages is their specialty or hobby.

For a modern engineer and research worker it is absolutely necessary to have practical command of foreign languages. A scientist who can read the literature of his field in several languages has a much better grasp of the subject. Learning foreign languages enriches the native language, makes it clearer, more flexible and expressive.

3. Here are some questions on the texts.

Find the questions on your text (1 or 2) and answer them:

1. Why is human language the most astonishing creation of man?
2. What can you tell about the appearance of language?
3. What do you know about English (Ukrainian, Russian)?
4. What do you call people who speak many languages?
5. Why has the English language become a world language?
6. What English speaking people groups do you know? How are they classified?
7. How many countries do you know where English is spoken?
8. How many languages are being spoken in the world today?
9. Why is it necessary to have practical command of foreign languages?
10. Why can people now communicate by words much better than they did it in the remote past?

VOCABULARY IN USE

1. Make sentences using these words.

1. International, English, an, is, now, language.

2. Learn, different, students, our, subjects.
3. In, the, we, city, live, a, flat, in, of, center, the.
4. Communication, is, a, of, in, means, human, society, language.
5. Languages, people, are, or, know, three, who, five, six, there.

2. Give English equivalents. Read and translate the text.

A truly educated person should know at least one foreign (мова), which will enable him to communicate with foreigners, (читати) books in the original, use a personal (комп'ютер) and take part in cultural and educational exchanges with other countries.

Among a great number of (іноземних) languages I've chosen English because it is the world's most important language in politics, science and culture. Over 330 mln people speak it as a (рідна мова) and nearly twice as many use it as a second language. Half of the world's (наукової літератури) is in English. It is the language of computer technology. You will hardly be able to find a good job unless you master the English language.

Furthermore, English is a very (мелодійна мова). When I heard English (мовлення) for the first time, I was taken with the harmony of its sounds and melodies. Later while studying the English (граматика) I discovered the other way of reflecting reality. And what I liked most about English, that's its (прислів'я) and idioms. They are wise, witty and rhymed; (багато традицій) of the English nation are represented in them.

Of course my command of the language is still rather far from being perfect. But I believe that everything depends on myself and I'm determined to achieve the aims I'm pursuing.

3. Translate into English.

Іноземна мова
декілька мільйонів людей
великий зріст населення
рідна мова
використовують з практичною метою
людство
людська мова
людське суспільство
засіб спілкування
за допомогою
єдиний

дар мови, поява
немислимий
первісна людина
спілкуватися словами
далеке минуле
швидкий ріст (збільшення)
розмовна мова
мовна спільність
з іншого боку
практично володіти іноземною мовою
більш гнучкий і виразний

4. Match the synonyms using your dictionary.

major	developments
to drop	to establish
to indicate	mankind
scholar	artificial
man-made	to oppose
to occupy	to mark
to explore	to help
events	to investigate
modern	aim
to conquer	up-to-date
throughout	to name
purpose	important
to call	humanity
primary	original
to resist	all over
scientist	to decrease
to assist	tongue
language	to set up

5. Translate into English.

1. Мова існує не сама по собі, а в людському суспільстві.
2. Мова існує у свідомості членів суспільства (мовної спільності), тому вона залежить від кожного з мовців.
3. Мова — найважливіший засіб спілкування людей, тобто засіб вираження і передачі думок і почуттів.
4. Мова — явище суспільне, вона виникає, розвивається, живе і функціонує в суспільстві.

5. Формою існування мови є мовлення.

GRAMMAR IN USE

1. Put the nouns in plural form.

century	wolf
language	hobby
society	system
community	specialist
picture	symbol
man	life
group	phenomenon
population	apparatus
continent	fish
examination	gas

2. Put the nouns in brackets in the correct form.

Language is human (speech), either spoken or written. Language is the most common system of communication, which allows (person) to talk to each other and to write their (thought) and (idea). The word language may be used to mean any system of communication, such as traffic (light) or Indian smoke signals. But the origin of the word shows its basic (use). It comes from the Latin word *lingua*, meaning (tongue). And a language is often still called a tongue.

3. Correct the mistakes in the sentences:

According to linguists (mans who study languages), there are about 6,000 languages spoken in the world today. This numbers does not include dialects (local forms of a language). Many language are spoken only by small groups of a few hundred or a few thousand people. There are more than 200 languages with a millions or more speakers. Of these languages at least 24 have over 50 millions speaker each; Arabic, Bengali, Cantonese, English, French, German, Hindi, Italian, Japanese, Javanese, Korean, Malay-Indonesian, Mandarin, Marathi, Portuguese, Punjabi, Russian, Spanish, Tamil, Telugu, Turkish, Urdu, Vietnamese, and Hindi and Urdu are sometimes grouped together as Hindustani.

4. Translate into English.

1. У світі налічується 5,5 тисяч мов. Більшість із них не мають своєї писемності і державного статусу, ними послуговується невелика кількість мовців.

2. Рідною мовою вважають мову своєї нації, мову предків.

7. Англійська мова належить до германської групи індоєвропейської сім'ї мов. Вона має свою давню писемність.

DISCUSSION

Work in pairs.

1. Discuss the following questions:

1. Why have you chosen English to study?
2. Do you agree that the English language is the world's most important language in politics, science and culture?
3. Are you satisfied with your knowledge of English?

2. Make up dialogues according to the model:

e.g.:

- What country are you from?
- I am from Ukraine.
- What language do you speak?
- I speak Ukrainian and Russian.
- What nationality are you?
- I am Ukrainian.
- Who lives in Ukraine?
- The Ukrainians, the Russians and other nationalities.

Use the names of the following countries in your dialogues.

Switzerland, Denmark, Poland, Turkey, Holland (the Netherlands), Germany, China, Ireland. Spain.

UNIT 2

BRITISH AND AMERICAN ENGLISH.

Reading and speaking

Pre-reading activity

1. Work in pairs. Do you think the following statements are true or false?

1. English was already an important world language four hundred years ago.
2. It is mainly because of the United States that English has become a world language.
3. One person out of seven in the world speaks perfect English.
4. There are few inflections in modern English.
5. In English, many verbs can be used as nouns.
6. English has borrowed words from many other languages.
7. In the future, all other languages will probably die out.

2. Read and remember the list of dialects of the English language.

AAVE (Ebonics)

International English

American English

Jamaican English

Australian English

Liberian English

British English

Malaysian English

Canadian English

Newfoundland English

Caribbean English

New Zealand English

Commonwealth English

Philippine English

English English

Scottish English

Hawaiian English

Singaporean English

Hiberno-English

South African English

Highland English

Standard English

Hong Kong English

Welsh English

Indian English

Read the text.

While reading and translating the text put down key words which you'll use later as props for reproducing its contents furthermore.

What is Language?

Many animals and even plant species communicate with each other. However, human language is unique in being a symbolic communication system that is learned instead of biologically inherited. Symbols are sounds or things which have meaning given to them by the users.

A word is one or more sounds that in combination have a specific meaning assigned by a language. The symbolic meaning of words can be so powerful that people are willing to risk their lives for them or take the lives of others. For instance, words such as “queer” and “nigger” have symbolic meaning that is highly charged emotionally in America today. They are much more than just a sequence of sounds to us.

Language and speech are not the same thing. Speech is a broad term simply referring to patterned verbal behavior. In contrast, a language is a set of rules for generating speech. A dialect is a variant of a language. If it is associated with a geographically isolated speech community, it is referred to as a regional dialect. However, if it is spoken by a speech community that is merely socially isolated, it is called a social dialect. These latter dialects are mostly based on class, ethnicity, gender, age, and particular social situations. Black English (or Ebonics) in the United States is an example of a social dialect. Dialects may be both regional and social. Not all societies have distinct dialects. They are far more common in large-scale diverse societies than in small-scale homogenous ones.

A pidgin is a simplified, makeshift language that develops to fulfill the communication needs of people who have no language in common but who need to occasionally interact for commercial and other reasons. Pidgins combine a limited amount of the vocabulary and grammar of the different languages. People who use pidgin languages also speak their own native language. Over the last several centuries, dozens of pidgin languages developed. The most well known one is Pidgin English in New Guinea and pidgin developed by American Indians is Chinook used on the Northwest Coast of North America.

At times, a pidgin language becomes the mother tongue of a population. When that happens, it is called a creole language. As pidgins change into creoles over several generations, their vocabularies enlarge. In Haiti, a French-African pidgin became the creole language spoken in that nation today by the majority of the population as their principle or only language. The same thing happened among some of the peoples of Papua New Guinea, the Pacific Islands of Vanuatu, and Sierra Leone in West Africa, where different versions of Pidgin English became creoles.

It is common for creole speakers to also speak another "standard" language as well. People may quickly switch back and forth between dialects, depending on the person they are talking to at the time. This pattern is referred to as diglossia. The African American situational use of standard and Black English is a prime example. Black English is usually reserved for talking with other African Americans.

Typically, the dialects of a society are ranked relative to each other in terms of social status. In the London area of England, the upper class speak "public school" English, while the lower class often use a Cockney dialect. Because of the stigma against the latter, upwardly mobile Cockneys in the business world may take language lessons to acquire the "public school" speech patterns.

Practice Quiz. "What is Language?"

1. Which of the following statements are true?

1. Humans are the only animals that communicate with each other.
2. Human language is 100% learned rather than biologically inherited.
3. Humans and all other large mammals use a symbolic communication system.

2. A language is _____

1. a broad term simply referring to human patterned verbal behavior in general
2. a set of specific rules for generating speech
3. another word for a dialect.

3. A dialect that mostly develops as a result of differences in class, ethnicity, gender, age, and/or particular social situations is referred to as a:

1. social dialect
2. regional dialect
3. genderlect or ethnilect

4. *Dialects develop:*

1. more often in small-scale societies with few people
2. more often in large-scale societies with many people
3. equally often in small-scale and large-scale societies

5. *A pidgin is:*

1. a dialect like Black English in North America
2. the mother tongue, or principle language, of a society
3. a simplified makeshift language that develops to fulfill the communication needs of peoples who have no language in common
4. a bird

6. *When a pidgin language becomes the mother tongue of a population, linguists refer to it as a(n):*

1. Gullah
2. creole
3. Ebonics

7. *When people speak different variants of a language in socially different situations, the phenomenon is referred to as:*

1. diglossia
2. bilingualism
3. neither of the above

VOCABULARY IN USE

1. Translate the words and word combinations into English.

людство	більшість із них
різні діалекти	давня писемність
засіб спілкування	словник мови
мова своєї нації	практичне використання
спілкуватися словами	знання мови
жива істота	розвиток науки
практично володіти	групи людей

2. Match the words in the left column with their explanations in the right column.

Word	a. a sound or a thing which has meaning given to it by the users.
Language	b. is one or more sounds that in combination have a specific meaning assigned by a language.
Regional dialect	c. is a broad term simply referring to patterned verbal behaviour.
Pidgin	d. is a set of rules for generating speech.
Creole language	e. is a variant of a language.
Social dialect	f. is associated with a geographically isolated speech community.
Dialect	g. is a simplified, makeshift language that develops to fulfill the communication needs of people who have no language in common but who need to occasionally interact for commercial and other reasons.
Speech	h. is a pidgin language which has become the mother tongue of a population.
Symbol	i. is spoken by a speech community that is merely socially isolated.

3. Translate the sentences into English.

1. Людська мова - це найцікавіший витвір людини.
2. Люди використовують інші засоби спілкування.
3. Людська мова дуже відрізняється від сигнало-подібних дій тварин.
4. Первинні люди мали кілька сот слів взагалі.
5. Високо цивілізовані нації мають більше ніж 700 тисяч слів у своїх словниках.
6. Поява мови на нашій планеті така ж давня, як і поява самої людини.

GRAMMAR IN USE

1. Put the adjectives into the comparative and suprlative degrees.

complex	good
fantastic	far
difficult	nearly
greatly	technical
bad	vast
safety	little
scientific	easily
new	own
full	native
practical	separate

2. Decide if the speaker is using British English or American English, and cross out the incorrect answer.

1. We've decided to take our vacation in the autumn/fall this year.
2. At my son's high school the new term/semester starts next week.
3. I never eat biscuits or sweets/candy.
4. Put that garbage in the dustbin/trashcan.
5. The trousers look nice with that waistcoat/vest.
6. The lorry/truck came past us on the highway.
7. My apartment is on the fourth floor but I'm afraid there's no lift/elevator.
8. The people next door are on holiday/vacation. They'll be away for a fortnight.
9. We left the car in the car park / parking lot and took the subway to the centre.
10. My trainers are in the wardrobe/closet.

3. Complete the table with the British English or American English equivalents.

British English	American English
• _____	• vacation
• trousers	• _____
• _____	• apartment
• trainers	• _____
• _____	• high school

- biscuits
- _____
- _____
- fortnight
- _____
- _____
- garbage
- highway
- _____
- Subway

3. Match the American and English equivalents.

- | | |
|-------------------|----------------|
| Subway | return ticket |
| Cab | shopassistant |
| Apartment | company |
| Corporation | autumn |
| Downtown | petrol |
| Highway | city centre |
| Attorney | underground |
| Baggage | time-table |
| Soccer | luggage |
| Railroad | taxi |
| Round-trip ticket | football |
| Salesman | railway |
| Ticket- office | motorway |
| One-way ticket | lawyer |
| Fall | flat |
| Gas | single ticket |
| Schedule | booking office |

**UNIT 3
OUR UNIVERSITY**

Reading and speaking

Pre-reading activity

Read the text and answer the questions.

FIREMAN

Dan is a fireman in a large city. He wanted to be a fireman all of his life. Dan's father was a fireman, and Dan wanted to be like his father. Dan's father was a brave man, and Dan is very brave,

too. He is not afraid of danger. Last year he saved the lives of three people.

Answer the following questions.

1. Where does Dan Parker work?
2. Did Dan want to be like his father? Why?
 1. Did you want to be a fireman as a child?
 2. Do you want to be like your father?
 3. Where does your father work?
 4. Was he a fireman?

II. Read the text. Get ready to retell it.

Our University

Now I am a cadet of Civil Defence University of Ukraine. My future profession is a specialist in the field of fire safety and civil defence. I like my future profession. This profession is very difficult but important for our society. The aim of civil defence in every country is to protect peoples' life and property in an emergency, such as fire, natural disaster, industrial accident.

The goals of Emergency Service are not only to respond to an emergency, for example to put the fire out, but to prevent it. New civil defence educational establishments have appeared in the country for the last 10 years. One of them is Civil Defence University of Ukraine.

The history of our University began on July 17th, 1928 when the All-Ukrainian Fire Technical Courses with six months' period of training were opened by the Decree of the Council of People's Commissars of Ukraine. In 1935 the Courses were reorganized into Kharkiv Fire Training Secondary School. The period of training was only one year. In 1946 the Secondary School was reorganized into Fire Technical School with three years' period of training. In 1992 Fire Technical School transformed into Kharkiv Fire Safety Institute. The period of training was five years. In 2002 Kharkiv Fire Safety Institute was reorganized into Fire Safety Academy of Ukraine. In 2006 the Cabinet on Ministers granted to the Academy the status of a university.

During these years the educational establishment had different names. And the high standards of teaching and training specialists for rescue units never change.

Nowadays it is a modern educational establishment with the considerable teaching, scientific staff, modern research and training facilities. Highly-qualified academic staff teach the future specialists for fire and rescue service.

Our University fulfills teaching for a number of specializations at the 5 faculties within the specialties Fire Safety, Civil Defence, Psychology. Teaching is accomplished according to the state educational qualification standards – Bachelor, Specialist, and Master.

VOCABULARY IN USE

1. Translate the words and word combinations into English:

майбутня професія
інженер пожежної безпеки
запобігання пожежі
захищати людей
приділяти особливу увагу
служба пожежної безпеки
служба цивільного захисту
навчатися в університеті
сучасне пожежне обладнання
період навчання
сучасний навчальний заклад
пожежна бригада
пожежна частина
службовець цивільного захисту
висококваліфікований персонал
майбутні спеціалісти
реорганізація та перетворення служби

2. Make up word combinations:

to use	victims
to rescue	as a crew
to work	interesting work

to offer	fire-fighting equipment
to calculate	about fire safety
to speak	the amounts of water and pressure

3. Fill in the gaps with nouns given in the box.

fire protection	fire prevention	subjects
fire-equipment industry		emergencies
universities		fire safety
chemistry and physics		mathematics

The fields of _____ and _____ offer interesting work outside of fire departments. Positions are in insurance companies, government service, the _____, and fire-safety education. Several _____ offer programs for persons interested in these fields. Knowledge of _____ and _____ are for young men who want to become fire fighters. Courses in these _____ will help them to understand how fire arises. They should understand _____ in order to calculate the amounts of water and pressure that are needed in various _____. They should also be able to speak well before audiences about _____.

4. Arrange the following words into sentences:

- a) How to use fire-fighting equipment; our University; how to rescue victims; teaches; how to work; and the many other skills; effectively as a crew,
- b) Each; more; year; fire fighters; than; receive 125,000; at these schools; training.
- c) The students; fire-fighting; techniques; skills; new; practice; they; have;also study; and .

GRAMMAR IN USE

1. Complete the sentences by appropriate personal pronouns:

- 1. I am from Ukraine. _____ first language is _____.
- 2. This man is from _____. _____ first language is French.
- 3. You are from Italy. _____ first language _____.
- 4. He _____ from the USA. _____ first language _____.

5. We ___ from Greece, ___ first language _____.
6. They _____ from _____. ___ first language _____ Chinese.
7. _____ is Russian. His first language is _____.
8. _____ are from Sweden. ___ language is Swiss.
9. _____ study English. Their first language _____.

2. How do we write these numbers in English? Write them down:

462; 2,345; 6.75; 0.25; 1,250,000; 10.04 ; 47% ; 10 September;
602 8477 (phone number); -5 centigrade; in 1903; in 1876 .

3. Read the text. Write all the numerals out of the text and read the text in a loud voice.

Earthquake

On October 17, 1989, millions of Americans turned on their TVs to watch the U.S. baseball championship. Just as the game was about to start (18:25), TV screens went blank. San Francisco had been hit by an earthquake.

Although destructive, this earthquake was insignificant compared to the great quake of 1906.

The 1906 quake struck at 5:00 a.m., jolting people from their beds. Buildings danced and tumbled, entire streets moved like ocean waves. Fires followed the quakes. Since San Francisco had lost its water supply, little could be done. Finally after 4 days, the rains came and winds changed. $\frac{3}{4}$ of San Francisco had burned down – 28,000 buildings were burned at a loss of \$350 million in San Francisco

4. Translate the sentences into English.

1. Я курсант першого курсу.
2. Моя майбутня професія - інженер пожежної безпеки.
3. Уряд нашої країни приділяє особливу увагу службі цивільного захисту.
4. Майбутні спеціалісти рятувальної служби вивчають різні предмети за їхнім фахом.
5. Період навчання у нашому університеті 5 років.
6. Професія рятувальника дуже важка, але дуже важлива для нашого суспільства.
7. Курсанти нашого університету навчаються протягом п'яти років.

8. Робота пожежної служби України координується Міністерством України з питань надзвичайних ситуацій та у справах захисту населення від наслідків Чорнобильської катастрофи.

DISCUSSION

Work in pairs.

Discuss the following questions together, then ask each other the questions.

Speak about your friends who are your groupmates or faculty mates:

1. Where do you study?
2. What year cadet are you?
3. What faculty do you study at?
4. How many years do you plan to study?
5. Why have you chosen this profession?
6. What would you like to become after graduating from the University?

Fire Service in Ukraine

Departments of Fire Safety in Ukraine are governed by the Ministry of Emergencies and Affairs of Population Protection from Chernobyl Catastrophe Consequences. The departments coordinate fire prevention and rescue operations. The main tasks of firemen can be determined by the following motto “to prevent, to save and to help”. According to Ukraine Constitution fire brigades of Ukraine extinguish fires, localize and control them free of charge. The Fire Service of Ukraine is a state institution. Recently the new foundations have been adopted to the Fire Service: a firefighter becomes a rescuer. Fire brigades take part in liquidation of consequences of emergencies. When we speak about emergencies we often mean disasters: earthquake, flood, hurricane, rain and snowstorm, draught. These disasters are caused by forces of nature. During an earthquake the buildings move and can be destroyed. There are many cracks in the ground. During a rain or snow storm it rains and snows heavily, the wind blows; you can see lightening and can hear thunder. The consequences of a rain storm or melting of snow can be a flood. To localize, to control rescue activities a fire rescuer must know and understand the origin of the disaster.

be determined by the following

motto ...–

new foundations have been

визначатися таким девізом

adopted... –

відбулося реформування

we often mean...–

ми часто маємо на увазі

1. What do you know about disasters? Describe them using words from the text.

2. Translate underlined word-combinations. Make your own examples.

3. Answer the questions:

- 1) What are the main firefighter's tasks?
- 2) What organization governs and coordinates the work of fire departments?
- 3) Why do fire departments extinguish fires free of charge?

CHECKING TASKS FOR UNITS 1-3

1. Translate into Ukrainian:

Accordingly, assistance, assistant, belongings, contributor, conqueror, creator, establishes establishment, explorer, indicator, invader, increasingly, foreigner, migration, outsider, powerful, purposeful, purposeless, scientist, scientific, settler, settlement, speaker, ruler, requirement

modern languages
according to the rule
the entire world
foreign languages
to drop into a place
to create a language
civil population
from centuries past
century of great inventions
active vocabulary
according to the author
exact sciences
to explore the outer space

methods of science
modern English
modern school
a man of science
primary education
primary school
to require help
scientific theory
scientific vocabulary
social sciences
at various times
some unknown address

2. Correct the mistakes in these sentences.

We arrived on the ten September.
There were two hundred twenty altogether.
My birthday is thirty-one August.
My phone number is seven twenty three, six naught nine.

3. This text includes some words used in American English. Underline them and write the British English words on the right-hand side.

It was getting near lunchtime and I needed some gas, so I left
1-----
the interstate and drove towards the nearest town. There was
2-----
a gas station just outside the town and I decided to stop and
3-----
have a look round. I put the car in a parking lot and took a
4-----
cab to the centre. It was midday and very hot, so I stopped at
5-----
a little cafe with tables on the sidewalk. I started talking to a
6-----
truck driver, who gave me a history of the town, and after-
wards
7-----
he took me on a guided tour. It made a very nice break. 8-----

4. Here are the answers to some questions. Work out the questions:

1. The word language comes from the Latin word lingua.
2. Language is the main means of communication among people.
3. English influences the development of the advanced technology of today.
4. Almost every language has its dialect.
5. Children by the age of 5 and 6 communicate well not having an idea of grammar.
6. English is a very flexible language.
7. Immigration in the 19th and 20th centuries has greatly influenced the development of the English language.
8. English-speaking people can be divided into 3 groups.

5. Answer these questions. Write your answers in words.

1. When were you born?

2. How much do you weigh?
3. What is the number of the flat where you live?
4. Is that an odd or an even number?
5. What is the approximate number of the population of your town?
6. What is the approximate number of the population of your country?
7. What is the normal temperature of a healthy person?
8. What is the number of the fire department in your district?

6. Render the text in English.

Англійська мова - друга в світі за кількістю людей, що нею розмовляють (після китайської). Для 400 мільйонів людей англійська - рідна мова, ще для 300 мільйонів - друга мова, також 100 мільйонів володіють нею, як іноземною.

Англійська мова належить до германської групи індоєвропейської сім'ї. Вона є державною або другою державною мовою у 45 країнах світу (для порівняння: французька мова - державна у 27 країнах, іспанська - у 20, арабська - у 17).

У результаті поширеності англійської мови в усьому світі виник ряд її національних варіантів, особливо відрізняється американська англійська (American English), що має значні відмінності від британської (British English) у вимові, інтонації та лексиці. Інші: австралійська англійська, канадська англійська, карибська англійська, ямайська англійська, ньюфаундлендська англійська, новозеландська англійська, південноафриканська англійська, сингапурська англійська (Singlish), малайзійська англійська (Manglish).

Також існує кілька субмов (жаргонів, арго), перш за все це кокні (Cockney) та афроамериканський жаргон (AAVE, Ebonics), яким розмовляють деякі афроамериканці.

UNIT 4 FIRE. WHAT IS FIRE?

Reading and speaking

Pre-reading activity.

Think over what you know about fire. Answer the questions below:

1. What do you know about fire and can you imagine yourself without fire?
2. Would you like to be able to control fire and to know the way to do it?
3. Why uncontrolled fire is one of man's worst enemies?

You are to read and translate the text about FIRE. Get ready to answer the questions given after the text.

Fire. What Is Fire?

The earliest use man made of fire was to keep him warm. As he became more civilized he learned to use fire in many other ways. Even in earliest times man had learned to use fire to cook food, to shape weapons and tools, to change clay into pottery, and to furnish light. Light was especially important because it drove away wild animals at night. But primitive peoples had very slow and unsatisfactory ways of kindling fires. Modern man has not only improved the methods of kindling fires, but also he uses fire in many more ways. Fire furnishes the energy to drive machines, and keeps vast industries running. It drives the large locomotives of our great railroad lines. It moves steamships across the ocean; it causes the airplane to fly; and it generates electricity. It has even changed the methods of fighting wars. Fire is used to remove and destroy waste materials, and to kill harmful bacteria.

Fire is also used in separating most metals from their ores, as well as in forging and shaping metals into useful things. Many chemical changes of materials are either made possible or speeded up by the use of fire. A few of these chemical changes are made in such places as sugar refineries and oil and rubber industries.

Controlled fire is useful to man, but uncontrolled fire is one of man's worst enemies. Thousands of lives and millions of dollars worth of property are lost each year through uncontrolled fires.

Answer the questions:

1. How did people learn to use fire?
2. What ways of kindling fires did primitive peoples have ?
3. What has modern man done with fire?
4. What does fire furnish and supply today?
5. What is fire used for?
6. What do you know about the use of fire in different industries?
7. How do you use fire in your life?
8. What is your opinion of controlled and uncontrolled fire?

VOCABULARY IN USE

1. Translate the words and word combinations into English.

Первісна людина	використання вогню
існування людини	добування поживку
знаряддя праці	неконтрольоване горіння
контролювати вогонь	знищувати шкідливі речовини
перші вогнища	сучасні люди
мільйони років тому	збиток майна
тисячі людських життів	палаючий факел
захищати від холоду	використовувати пар для ви- добутку енергії
виробляє необхідну електрич- ну енергію	вдосконалити свою зброю
навколо табірної вогнища	

2. Fill in the gaps with nouns given in the box.

Fire and Civilization

fire, food, weapon, candle, light, water, iron, cold, steel, winter, night, animal

The use of (...) improved early man life in many ways. Cooking made his (...) food more tasty. He could improve his wooden (...) and tool by hardening their points over a flame. Camp-fires could frighten away wild (...).

Fire protected man from the (...). In coldest (...), man could stay warm in heated shelter.

Man also learned to use fire to make (...). Man first made (...) in fire.

Soon man learned that (...) could be boiled and that food could be cooked in boiling (...).

Fire also gave (...). Primitive man gathered around fires at (...). Then he learned to make (...), and later lamps that burned kerosene, whale oil, or other fuels.

3. Read the article about the meanings of the word FIRE. Do exercises after it.

Багатозначність слова fire і його переклад українською мовою

fire:

1) Вогонь, полум'я: ~ endurance – вогнестійкість, ~ point - температура загоряння, to catch ~ - загорятися; 2) Топка, піч: electric ~ - електрична піч; 2. Пожежа: forest fire - лісова ~; 3. Жар, лихоманка: St. Anthonys ~ - лихоманка Антонова (рожисте запалення); 4. Пил, жвавість, запалення: sacred ~ натхнення; 5. Військовий, гарматний вогонь Running ~ - побіжний вогонь; 6. Блиск, сяйво: ~ of diamond - сяйво діаманта.

У пожежно-технічній термінології існують слова з коренем <fire> з різними значеннями:

вогонь:

- Fireproof - *вогнестійкий*
- Firebrick - *вогнестійка цегла*

пожежа, той, що використовується на пожежі:

- Fire boat - пожежний човен
- Fire brigade - пожежна команда

протипожежний:

- Fire alarm installation –
- протипожежна сигналізація

A) Sort out the words into three groups according to their meaning:

fireguard, firescreen, fire-escape, fire fighter, fire-hook, fire hose, fire-hazardous, fire-extinguisher, firestorm, firerisk, fire-resistance, fire-hydrant, fireman, fire-protective, fire-break.

B) Translate the words into English:

пожежний сигнал, пожежна команда, пожежне депо, пожежна вежа, вогнестійкий, камін, пожежний рукав, травяна пожежа, запалити, загасити, кочегар, вогненебезпечний.

4. Choose the correct word and open the brackets:

By the last ice (centenary, age), fire is universally attested in the Old World by the abundance of hearths within the living sites. But the archaeological record provides no (claws, clues) as to how these fires were (kindled, knotted). Natural sources such as (lightning, lineage) or volcanic activity would certainly have been available.

The (availability, ability) to start fires at will is a significant cultural step and constitutes a distinct (intellectual, intelligible) attainment. Archaeology shows that the earliest men were not wholly (dependent, deprived) upon natural sources and possessed the knowledge to kindle fires when needed.

5. Match the words in the left column with their explanations in the right column.

A fireguard	is a building where fire engines are kept, and where firemen wait until they are called to put out a fire.
A firebrick	is a metal cylinder which contains water or chemicals at high pressure for putting out fire
Fire	is a screen made of strong wire mesh that you put round a fire to that young children cannot accidentally burn themselves and prevent burning wood or

	coal falling out.
A fire station	is an occurrence of uncontrolled burning which destroys buildings, forests, crops, etc.
A fire-storm	is a type of brick which cannot be damaged by heat and which is used to line furnaces.
A firebreak	when it occurs in a place that is burning after being bombed, strong winds rush into it to take the place of the hot air that is rising, causing the blaze to burn uncontrollably.
A fire extinguisher	is an area of open land in a wood or forest, which is intended to stop a fire from spreading.

GRAMMAR IN USE

1. Translate the sentences into English.

1. Розумне використання вогню – необхідна передумова існування людини, важливіша, ніж знаряддя праці.
2. Користування вогнем і вміння добувати його становлять одну з особливостей людської культури.
3. Що таке неконтрольоване горіння?
4. Вогонь, який контролюється людиною, – це корисна річ.
5. Пожежа – це постійна загроза життю і власності.
6. Вогонь – це тепло, яке зігріває людину, і світло, яке відлякує диких тварин.
7. Вогонь – це природне явище, яке людина навчилася використовувати з практичною метою.
8. Сьогодні наш університет – це сучасний освітній заклад.
9. Зараз я курсант і маю служити Вітчизні та одночасно навчатися.

2. Open the brackets. Use the correct form of the verb *to be*

1) It (to be) hard for a fire man to know how a fire behaves, because so many things can affect it. The strength and direction of the wind (to be) important factors.

2) Smoke (to be) a mixture that comes from burning of any kind of material, such as coal, wood, or petroleum.

3) After the fire (to be out), the fire man still have much work to do.

4) The heat-reflective suits (to be) fire resistant and coated with aluminum to reflect heat.

5) Radio (to be) important to the modern fire department.

6) The smallest unit of fire department (to be) a company of about 6 to 16 men.

3. Open the brackets. Use the structure *there is..., there are...*

1) In isolated forest areas, (there be) forest rangers on the look out for fires.

2) Forest fires (to be) a great danger, especially in the summer when (there be) long periods without rain.

3) There (be) always some men on duty in fire station. The fire trucks always (to be ready) to go.

ПРО ІСТОРІЮ ВОГНЮ

Ми не знаємо, як первісні люди навчалися поводитися з вогнем, як думка первісного примата допомогла йому добути свою першу вуглину. Вогонь зігрівав людину, відкривав їй нові джерела харчування, за його допомогою виготовляли посуд і знаряддя праці, випалювали деревину зі стовбурів дерев для човнів, відлякували від стоянки небезпечних тварин.

Спочатку люди використовували вогонь, посланий їм природою. Це могла бути лава вулкана, лісова пожежа від спаленого блискавкою сухого дерева, самозаймання злежаного сіна... Хоча це були випадкові явища, але вони давали чудове джерело тепла, яке допомогло людині вижити.

Різними шляхами йшла людина до вогню, і прийоми його добування були найрізноманітнішими: тертя, пиляння, свердління, стругання - все це здійснювалось із застосуванням двох шматків сухого дерева. Пізніше з цією метою почали використовувати іскри від удару каменя об камінь. І найкраще для цього підходив кремій. Тепло, одержуване внаслідок цих зусиль, і було причиною самозаймання тирси, іскри переносилися вітром на легкозаймисті мох, суху траву, сухі гілки дерев.

UNIT 5

FIRE IN LEGENDS AND RELIGION

Reading and speaking

Pre-reading activity

You are to find the following words in the article below. What connection do you think they have with Fire in Mythology? Work in pairs and use the dictionaries if necessary :

a gift of a god a dragon
the Temple of Vesta a monster
the Persians animal hoofs and claws
the Egyptians the Greeks
a priest Rome
a shrine to worship

Read the text and then discuss the list again.

Fire in Legends and Religion

We can only guess that man may have gained his knowledge of fire from observing things in nature, such as lightning, the fire of volcanoes, and the heat of the sun. Early man also must have noticed that sparks fly when stones are struck upon one another, or when the hoofs or claws of an animal strike some hard substance. In Persian literature, there is a story of the discovery of fire in a fight with a dragon. One of the stones which the hero used as weapons missed the monster and struck a rock. Light shone forth and man saw fire for the first time. The mythology of nearly all primitive races contains some account of the accidental or the supernatural happenings which first revealed fire to men. Fire was regarded as a true gift of the gods.

Fire was considered sacred because it was so essential to the welfare of man. Fire worship and sun worship have existed since very early times. Because fire was so hard to produce, the custom soon became common of keeping a public fire, which was never allowed to die out. These fires were kept in every village among the Egyptians, Persians, Greeks, and Romans. They were often in the civic center of the community.

The Temple of Vesta in Rome was an outstanding example of the importance of fire to the Romans. Vesta was originally the goddess of the hearth, and her shrine was in every home. But when religion became an affair of state, a temple was erected in which the sacred fire was kept constantly burning. This temple consisted merely of a round hearth. For its service there were selected the Vestal Virgins,

who devoted their lives to the duty of attending the fire. They were selected by the high priest, or Pontifex Maximus, and the safety of the state was thought to depend upon the faithfulness of the Vestal Virgins.

1. Answer the questions:

1. How did man gain his knowledge of fire?
2. What can we find in Persian literature concerning the discovery of fire?
3. What does the mythology of most of the primitive races contain?
4. How was fire regarded by early man?
5. What do you know about keeping a public fire?
6. How and where were these fires kept?
7. What examples of the importance of fire do you know?
8. Why did religion become an affair of state?

VOCABULARY IN USE

1. Translate the words and word combinations into English.

2. Fill in the gaps with suitable words from the brackets.

Fire was put to use by all (early, first, old) peoples. Many peoples worshiped fire. All thought that it was (sacred, saint), a gift from the gods. Most peoples had (myths, stories, news) that told how the gods gave fire to man.

Many myths speak of the striking of (iron, steel, coal) against stone to make fire. The Scandinavians believed that Thor, the god of thunder, struck a hammer against a piece of (flint, paper, flame). Another story is that Hermes, the god of the Lapps, hit his own head with a hammer to produce (sparks, drops, snowflakes).

The story of Prometheus, the Greek (hero, champion, rescuer) tells of his going to the home of the gods on Mount Olympus. He returned with a spark of fire hidden in his staff.

3. Fill in the gaps with suitable words from the box.

a)

Household Special Burning Long Loud Important High

In Mexico the Mayas and the Aztecs kept a fire burning on top of a (...) pyramid all the time. This fire, and all others in the country, was put out every 52 years. The fires were relit in an (...) ceremony. With the leaders of the country watching, the priests rubbed (...) dry

sticks together. Sometimes it took a (...) time for them to make a spark. Finally, when the fire was started again, there was a (...) shout of triumph. A messenger rushed off with a (...) torch to relight the fire on the pyramid. People crowded about to light torches for their own (...) fires.

b)

Sacred Large Capital Certain Each Local

The Greeks, the Egyptians, and the Romans kept fires burning in their temples. In the Temple of Vesta in Rome the (...) fire was cared for by priestesses called the vestal virgins. If the fire went out, all business was stopped until it had been rekindled. In Greece the (...) fire was kept burning in a (...) building in (...) town. The fire was cared for by the (...) chief. In the (...) city, the king himself tended the fire.

GRAMMAR IN USE

1. Translate the sentences into English.

1. На Алясці індійці деяких племен труть сірку між двома каменями, вдаряючи їх між собою.

2. При пожежі люди дзвонять 01.

3. Горить деревина на території промислового заводу. Телефонуй у пожежну частину.

4. Ми знаємо три головних шляхи захисту від небезпеки.

5. Багато людей сьогодні видобувають вогонь так само, як і перша людина.

6. Деякі тварини або й птахи "застосовують" предмети для добування їжі, але ніхто, крім людини, ніколи не послуговується вогнем.

7. Споконвіку людина знає, що вогонь - це найдавніша, найдорожча і найнебезпечніша річ, якою користується людство.

8. Вогонь застосовується і контролюється людиною вже майже півтора мільйона років.

9. В Європі сліди від багать існують в Північній Греції, Південній Франції, Угорщині, Італії, Росії.

10. Кожної години у вогні гине одна людина, 2-3 чоловіки одержують травми і опіки, кожен третій загиблий – дитина.

11. Якщо виникла пожежа, не розгублюйтеся. Викличте пожежну охорону, виведіть з приміщення дітей, намагайтеся погасити вогонь тими засобами, що є під рукою.

2. Open the brackets. Use the correct form of the Present Indefinite Tense.

1) Smoke (to harm) health because of its effect on the nose, throat, and lungs. Smoke also (to make) cities (to look) dark and (to cut) out much sunlight.

2) In spite of all the improvements in fighting forest fires, millions of dollars of damage (to do) every year

3) When something (to go wrong) – a fire, medical emergency, water accident or any other threat to safety – Fire Department is there.

4) Often the fire chief (to keep in contact) with his men by two-way radios. He also (to keep in touch) with fire department headquarters.

3. Choose the correct subject in the sentences:

1) *Matches/ Smoking* usually cause the greatest number of fires each year in the United States.

2) *Many myths / A myth* speak of the striking of iron against stone to make fire.

3) When the *fire / fires* goes out, all business stops.

4) *The use and control of fire and its products / The use* of fire involve inventions fundamental to human society and culture.

UNIT 6 KINDS OF FIRE

Reading and speaking

1. Look at the words given below.

Match antonyms to the words given in group A.

Match synonyms to the words given in group B.

Which words can you translate without consulting the dictionary?

A.

light rapidly to unite to obtain rapid union heat	– slow, – slowly – to separate – separation – to give away – cold – darkness
---------------------------------------------------------------------	------------------------------------------------------------------------------------------------

B.

gasoline threat to flame	– danger – benzene, petroleum, fuel – to burn, to set the fire
--------------------------------	----------------------------------------------------------------------

2. Find the international words in the sentences and translate them. Pay attention to the pronunciation of these words. What is the difference in Ukrainian and English variants of pronunciation?

As a substance burns, heat and light are produced.

This process may be described by any of the three words.

All substances do not burn in the same manner.

Most of the energy caused by a fire goes into heat

Antoine Lavoisier was a French chemist, who proved that burning is the result of the rapid union of oxygen with other substances.

Visible smoke generally accompanies fire.

Heat presents a physical danger to man because of hot gases and radiation.

Pre-reading activity.

Guess whether these statements are true or false then read the text and see if your guesses were correct.

- a) All substances do not burn in the same manner.
- b) Visible smoke always accompanies fire.
- c) Heat presents a physical danger to man because of hot gases and radiation.

3. Read and translate the text.

Kinds of Fire

Fire is the heat and light that comes from burning substances. In 1774, Antoine Lavoisier, a French chemist, proved that burning is the result of the rapid union of oxygen with other substances. As a substance burns, heat and light are produced. Burning is also called combustion. Often oxygen unites with other substances at such a slow rate that little heat and no light are given off. When this happens we call this process *oxidation*, rather than *burning* or *combustion*. Oxidation takes place whenever oxygen unites with other substances either rapidly or slowly. For example, when oxygen unites with gasoline, the action takes place rapidly and heat and light are given off. This process may be described by any of the three words, burning, combustion, or oxidation. When oxygen unites with iron and causes it to rust, burning, or combustion, does not take place, but oxidation does.

All substances do not burn in the same manner. Substances such as wood, oil, magnesium, gas, and coal give off heat and a flame, while a substance like charcoal gives off heat with only a glow. But all these substances require oxygen, which may be obtained from the air, in order for them to burn.

Sometimes old rags soaked with oil or paint are put aside and forgotten. Oxygen from the air may slowly unite with the oil in the rags. At first, there will not be a fire. But as oxidation gradually takes place, enough heat accumulates to set the rags on fire. This type of burning, called spontaneous combustion causes many fires.

Very rapid burning may cause explosions like those produced by gunpowder and dynamite. Here, oxidation takes place so rapidly that great volumes of gases are produced. These require many hundreds of times the space that was formerly occupied by the gunpowder or dynamite before it was oxidized. These gases expand so rapidly

and violently that they produce an explosion. An explosion is really a sudden increase in volume, caused by rapid burning.

Answer the questions:

1. What do we call “oxidation”?
2. Why does fire present threat to life and property?
3. What is spontaneous combustion?
4. What can cause an explosion?
5. What produces flame and heat?
6. How did the first man use a flame?
7. What combustion products can be named “evidence of fire”?
8. Why does heat present physical danger to a human being?

VOCABULARY IN USE

1. Translate the words and word combinations into English.

Горючі речовини

виділяти тепло

велике полум'я

яскравий вогонь

у порядку убування

займиста рідина

види пожеж

класифікація пожеж

поглинати велику кількість тепла

внутрішня властивість рідини

доступ кисню до полум'я

кількість випарів

2. Translate the words using the words of the same root:

to require _____ (дієслово) - requirement - вимога

to accumulate _____ (дієслово) – accumulator - накопичувач

explosion _____ (іменник) – explosives - вибухівка

sudden _____ (прикметник) – suddenly - раптово

to expose _____ (дієслово) - exposure - вплив

spread of fire _____ (іменник) - to spread – поширюватись

3. In the following line choose one word that doesn't belong to the group and explain why you think so:

1. oxygen, wood, carbon, hydrogen
2. iron, lumber, oil, magnesium
3. gas, coal, charcoal, wood

Divide the words into the following groups: Chemical substances. Fuels. Gases. Mineral resources:

4. Match the words in the left column with their explanations in the right column:

1. A fire lighter ➤ is a burning pile of wood, coal or other fuel that you have made and set the light to, for example in order to keep yourself warm or cook food over.
2. Fire-fighting ➤ is a small block of material which burns easily, used to start a fire burning.
3. A firework ➤ is a small object with chemicals inside it that burns with clouded flames, sparks, or smoke when you light it and often makes loud noises too.
4. Bonfire ➤ is the work of putting off fires

5. Make up the sentences from the following:

1. Fire is actually a byproduct of a larger process called combustion.
2. Fire and combustion are two words used interchangeably.
3. However, firefighters should understand the difference.
4. Combustion is the self-sustaining process of rapid oxidation of a fuel, which produces heat and light.
5. Fire is the result of a rapid combustion reaction.

GRAMMAR IN USE

1. Five of the verbs in the box are regular. Which ones are they? The others are irregular. Write down all the verbs in the Past Indefinite Tense:

make _____	prove _____	produce _____
learn _____	control _____	take _____

drive _____	call _____	describe _____
unite _____	give _____	notice _____
soak _____	put _____	consider _____

2. Translate the sentences into English.

1. Французький хімік довів, що горіння – це результат взаємодії кисню з паливом.

2. Офіцери пожежної служби відвідували школи та проводили бесіди з дотримання правил пожежної безпеки в молодших класах.

3. Наш підрозділ брав участь у гасінні пожежі на хімічному комбінаті.

4. Працівники пожежної охорони з честю витримали серйозний екзамен на зрілість, відвернули біду від сотень тисяч людей, проявили сміливість, героїзм і мужність.

3. Put the verbs in brackets into the correct form.

Fire worship (to be) an ancient religious practice (to base) on the idea that fire (to be) sacred. Since early times, people (to worship) fire because it (to destroy, (to purify), and (to give) heat and light. Some people (to believe) a god or spirit (to inhabit) fire. The Parsis of India and other followers of religion (to call) Zoroastrianism (to use) fire as a divine symbol . The ancient Greeks and Romans (to consider) fire one of the major elements that (to make up) the world. Today, many people (to build) bonfires on various occasions. This practice probably (to develop) from the ancient tradition of fire worship.

4. Fill in the missing prepositions and adverbial particles. Find some facts about fire destruction.

of (4) from in (3) for (2)

Fire Destruction

Fire can also be a dangerous enemy. Uncontrolled fires cause the loss (...) many lives and destroy a great deal (...) property. Cities suffered greatly (...) fire (...) early days because the buildings were made (...) wood and were built close together. Once a fire got a good start, it was hard to stop it. Rome caught fire (...) A.D. 64 and burned (...) eight days. The great London fire (...) 1666 raged (...) four days. It is said that \$50,000,000 worth (...) property was de-

stroyed. It was after this terrible fire that the first fire insurance company was formed

DISCUSSION

1. Are the following statements true or false? Correct or prove the statements. Begin with:

I'm afraid that's wrong; that's not quite so; as far as I now; I think you are mistaken; on the contrary; according to the text:

- 1) Oxidation does not take place when oxygen unites with other substances.
- 2) Oxygen from the air may slowly unite with the fuel.
- 3) An explosion is really a slow increase in volume, caused by rapid burning.
- 4) Spontaneous combustion causes many fires.
- 5) We do not call process of oxidation *burning*.
- 6) When oxygen unites with iron, iron begins to melt.

2. Discuss the following questions together:

1. What do you know about fire?
2. What do you need to kindle a fire?
3. How old were you when you were able to kindle a fire?
4. Do all substances burn in the same manner?
5. What type of burning can be called spontaneous combustion?

UNIT 7 WHAT FIRE PRODUCES

Reading and speaking

Pre-reading activity

1. Get into two groups and read the text.

Group A is to write out the sentences that can be answers to the following questions:

1. What is the ash?
2. Why does the bottom of a pan often become black?

Group B is to write out the sentences that can be answers to the following questions:

1. Why do we usually buy coal with the lowest ash content?
2. Why is soot formed on the bottom of a skillet?

What Fire Produces

An entire piece of wood or coal will not burn, even if there is sufficient oxygen present. Most of us have taken the ashes from the stove, furnace, or fireplace. The ash, generally a mineral, is mixed with the fuel, but will not unite with the oxygen. Some fuels have a lower ash content than others. This is important to remember when buying coal because you want the coal with the lowest ash content, provided that it is as good in other respects.

Often the bottom of a pan or a skillet becomes black when it is placed over a fire. This is because of the unburned carbon, and soot. Soot forms when there is not enough oxygen present to burn all the carbon of the fuel. If a furnace produces great quantities of soot, some of the carbon of the fuel is not being burned, and is wasted. This can be remedied by seeing that sufficient air is supplied to burn all the carbon in the fuel.

Gases. Substances that burn in air are nearly always composed of two elements, carbon and hydrogen, or their compounds. For example, coal, coke, and charcoal are mostly carbon. Natural gas, gasoline, and fuel oils consist of many compounds of hydrogen and carbon. When these fuels burn, the oxygen of the air unites with the carbon and hydrogen to form carbon dioxide gas and

water vapor. These usually mix with the air and disappear. The uniting of the oxygen with the hydrogen and the carbon is what produces the heat and flame of the fire.

Often, a deadly gas called carbon monoxide forms when there is not enough oxygen to burn the fuel completely. For example, when gasoline burns in an automobile engine some of this gas forms and comes out the exhaust pipe. If you are in a closed garage when this happens, you are in danger of breathing this gas. Death may result. A person should never run the engine of an automobile in a closed garage. Smoke, like soot, is produced when too much fuel is added for the amount of oxygen present. It is unburned carbon going out the chimney. Smoking furnaces are wasteful because all the fuel is not burned and the heat energy is lost. The smoke is also a nuisance, because it makes a neighborhood dirty.

Light. Most of the energy caused by a fire goes into heat, but some of it goes into light. The light results either because the carbon particles in the flame become so hot that they give off light energy, or because the gas that is burning is a type that gives off light.

Ever since fire was discovered, man has been trying to make more energy from heat go into light energy. He first used a flaming piece of wood as a torch. He later discovered that if he dipped the wood into pitch before lighting it, the light lasted longer and was much brighter. Years afterwards man poured oil in a dish, placed a wick in it, and lighted the wick. This gave a better light. He later invented the tallow candle, which was convenient to carry around. The kerosene lamp, with its chimney to help control the air currents, was a big improvement over the candle. After electricity was made usable, Thomas A. Edison caused electricity to pass through a carbon wire or filament until the filament became so hot that it gave off light.

VOCABULARY IN USE

1. Translate into English:

ймовірність виникнення пожежі	вплив небезпечних факторів пожежі
займистість	тривалість остаточного тління
горюче середовище	димовий заслін
швидкість поширення полум'я	тривалість поширення полум'я

окисна речовина
продукти горіння
світіння

осередок пожежі
самозаймання
температурні межі

2. Choose the correct word and fill in the gaps in the sentences:

1) Substances that burn in air are nearly always compounded of (two, twelve, twenty) elements.

2) Heat is the combustion product most responsible for the (beginning, spread, finish) of a fire in a building.

3) (Visible, invisible, black, white) smoke generally accompanies fire.

4) Early man used a flaming piece of (wood, coal, tree, grass) as a torch for lighting of his house.

5) Heat presents a (physical, material, moral) danger to man.

3. Make sentences out of the following.

Flashover

1. Flashover occurs when flames flash over the entire surface of a room or area.

2. The actual cause of flashover is attributed to the building of heat from the fire itself.

3. As the fire continues to burn all the contents of the fire area are gradually heated to their ignition temperatures.

4. When they reach their ignition occurs and the area becomes fully involved in fire.

5. This actual ignition is almost instantaneous and can be quite dramatic.

6. A flashover can usually be avoided by directing water toward the ceiling level and the room contents to cool materials below their ignition temperatures.

4. Match each of the following terms with its definition:

To set smth on fire	Something is burning and being damaged or destroyed by an uncontrolled fire.
To be on fire	To start burning in order to damage or destroy smth.
Fume	A substance or mixture of substances in a gase-

	ous state used to produce light and heat
To inflame	Is the light that comes from a fire that you have lit.
Gas	To give off light suddenly or in transient bursts
Firelight	strong and unpleasant or harmful (= dangerous) gases , smells or smoke.

GRAMMAR IN USE

1. Translate the sentences into English.

1. Наступного тижня команда нашого університету братиме участь у змаганнях з пожежно-прикладного спорту.
2. Старший лейтенант перевірить наявність димових сповіщувачів у дитячому будинку.
3. Вони закінчать опис пожежі завтра.
4. Пожежна частина отримає сучасне пожежне обладнання наступного року.
5. Коли я закінчу навчання в університеті, я буду працювати інспектором пожежної безпеки.
6. Продукти горіння ми будемо розподіляти на чотири категорії: пожежні гази, полум'я, висока температура, дим.
7. Обов'язком пожежника в майбутньому буде лише запобігання пожежам, а боротися з пожежами будуть машини.

2. Put the verbs in brackets into the correct form.

- 1) Hundreds of valuable books (to go up) in smoke if this library (to catch) a fire .
- 2) If forest rangers (not to act) quickly, the fire (to get out) of control.
- 3) Often airplane patrols look for smoke. If a fire is spotted before it (to start) to spread, it (to be put out) quickly. But if the fire (to be) too big, fire fighters are either (to fly in) by helicopter or (to parachute) to the site of the fire.
- 4) The fire (to move) by jumping from tree to tree. When it (to reach) the fire line it (to have) no place to go and (to stop).
- 5) Then for days and sometimes weeks afterward, fire fighters (to go) over the area until (there be) no more burning embers.

3. Fill in the missing prepositions and adverbial particles. Find some more facts about fire destruction.

Fire Destruction.

One of the worst fires (...) the United States was the Chicago, Illinois, fire (...) 1871. (...) three days it burned, destroying about 18,000 buildings (...) an area of three square miles (...) the center (...) the city. About 100,000 people lost their homes and 250 lost their lives. On the same day that the Chicago fire started, another the worst fires (...) United States history began (...) Peshtigo, Wisconsin. (...) 24 hours the combination (...) a forest fire and a violent windstorm took the lives (...) 1,500 men, women, and children.

DISCUSSION

1. The article you have read tells you about some problems in kindling fire. Get ready to discuss these problems. Work in groups of four to prepare and act out a roleplay.

Causes of Fire

Smoking and matches usually cause the greatest number of fires each year in the United States. However, serious losses result from blazes of electrical origin. Other leading sources of building fires—in descending order of number of alarms—include heating plants and cooking devices, open flame and sparks, children and matches, flammable liquids, and rubbish.

2. You are a fire inspector at a school and you must you're your schoolchildren some dangerous and useful aspects of fire. Use the questions below:

CHECKING TASKS FOR UNITS 4-7

1. Correct the mistakes in these sentences.

- 1) The burning of materials are an exothermic chemical oxidation process.
- 2) A primitive man first used a flaming piece of wood as a torch.
- 3) Heat always presented a danger to man.
- 4) There is certain combustion conditions under which some materials burn without producing visible products of combustion.

- 5) Oxygen from the air slowly unite with the oil in the rags. At first, there will not be a fire.

2. Fill in the gaps with suitable words from the box.

Capital Spontaneous First Man Hot
Similar Important Early Two Dry
Burning Household Large step All
Human Special Great High Local
Sacred Certain Painful Each Spirit

Early Man and Fire

Peking man, who lived about 250,000 years ago, is thought to be the (...) human able to start and control fire. Being able to make and use fire was his first(...) toward civilization.

(...) man saw fire start when lightning hit a tree. Perhaps he also saw coal or the peat in marshes burn from (...) ignition. He saw fire spread and destroy (...)areas of grass, brush, and timber. He was frightened to see (...) beings and animals die in the heat and flames. But he enjoyed the warmth of a fire and soon learned that fire could be used.

After this, for hundreds of thousands of years, man carried (...)coals and (...) embers as he and his family moved from place to place. He learned that fire could make him warm and could make food taste better. He also learned that it could give him a (...) burn. In time, he learned that a spark could start a fire in (...) leaves and grass. He discovered, probably by accident, that (...) stones striking together could make the sparks to start a fire.

3. Translate the sentences into English.

1) Гасіння пожежі - це комплекс бойових дій пожежних підрозділів, які спрямовані на ліквідацію горіння та забезпечення безпеки людей.

2) Пожежа - це неконтрольоване горіння поза межами спеціального осередку, яке призводить до матеріальних збитків.

3) Пожежа – це складний фізико-хімічний процес.

4) Щорічно пожежі завдають великих збитків економіці нашої країни.

5) Пожежні навчання - це вправи, які необхідні кожній людині як вдома, так і на робочому місці.

4. Answer these questions. Write down your answers.

2. What is fire?

3. What is ash?

4. What is gas? Supply some examples.

5. What happens when natural gas, fuel oils or gasoline burn?

6. What produces the heat and flame of the fire?

7. How is carbon monoxide formed?

8. What is light and light energy?

5. Render the text in English

ПРОМЕТЕЙ

За сивої давнини, коли над усім світом панував Зевс, люди, що тільки-но розселилися по землі, були кволі, безсилі, лякливі. Вони не вміли ні думати, ні розуміти того, що бачили довкола. Зі страхом дивилися вони на грозові хмари, на пекуче сонце, на безкрає море і височенні гори.

Від усього, що їх лякало, люди мершій ховалися в свої підземні нори. Не було тоді у них ані жител, ані вогнищ родинних. Люди не варили їжі, не грілися коло багать, і було те життя без вогню злиденним животінням.

Пожалів людей своїм великим серцем титан Прометей і сміливо порушив Зевсову заборону: не давати вогню людям.

Якось він перестрів Афіну Палладу і попросив її відчинити йому потайні двері чорного ходу, що вів до Зевсового палацу, — адже Прометею було вже не вільно з'являтися на Олімпі. Афіна допомогла Прометею, бо була завжди прихильна до титана.

Титан, опинившись у Зевсовому палаці, мершій узяв із божественного вогнища невелику іскру, сховав її у порожній очеретині та й приніс людям на землю.

Відтоді засяяли, заяскріли веселі вогнища на землі. Навколо них люди збиралися цілими родинами, смажили м'ясо, грілися,

танцювали. Люди зажили тепер веселіше, дружніше, і з того щиро радів титан Прометей. Він навчив їх приборкувати вогонь, топити мідь, кувати зброю. Завдяки Прометееві вони навчилися думати і тоді, мабуть, вперше відчули себе людьми.

UNIT 8 HISTORY OF FIRE DEPARTMENT

Reading and speaking

Pre-reading activity

1. You are going to read an article about the history of fire-fighting organizations. Look at the names of cities and say what you know about fire fighting practice in these cities at different time.

Rome; London; New York City

2. Use your dictionary to check the following words. Try to predict the order of their appearance in the text:

insurance company governor bucket warden

volunteer steam pumper chimney rattle watch alarm

Read the text and translate it. Make a close-to-the text retelling of the contents.

History

One of the first fire-fighting organizations was established in ancient Rome. Augustus, who became emperor in 27 B.C., formed a group called the *vigiles*. The *vigiles* patrolled the streets to watch for fires. They also served as the police force in Rome.

Scholars know little else about the development of fire-fighting organizations in Europe until after the Great Fire of London in 1666. This fire destroyed much of the city and left thousands of people homeless. Before the fire, London had no organized fire protection system. After the fire, insurance companies in the city formed private *fire brigades* to protect their clients' property.

The development of U.S. fire protection. The early American colonists fought building fires by forming *bucket brigades*. One row of volunteers passed buckets from a source of water to the fire. Another row passed back the empty buckets. The fire fighters also pulled down buildings next to the burning structure with iron hooks attached to ropes. In this way they created a separation between the buildings to help prevent the fire from spreading.

Peter Stuyvesant, the governor of a colony that included what is now New York, made one of the first efforts to establish a fire prevention system. In 1648, he appointed four fire wardens to inspect homes in New Amsterdam, which later became New York City. The wardens' chief duty was to inspect chimneys for fire hazards. In 1658, Stuyvesant began one of the first community alarm systems. He appointed a number of men to patrol the streets at night and watch for fires. The men were called the *rattle watch* because they shook wooden rattles to alert the townspeople whenever a fire was discovered.

In 1679, Boston established the first paid fire department in the American Colonies. It consisted of a crew of men who operated a hand pump. In 1736, Benjamin Franklin founded the colonies' first volunteer fire department in Philadelphia.

By the early 1800's, many U.S. cities had volunteer fire departments. The departments required numerous volunteers to pull and operate the hand pumps and hose wagons. In many cities, the most prominent citizens belonged to the volunteer departments, which became powerful social and political organizations.

In the mid-1800's, steam pumpers pulled by horses began to replace hand pumps. The steam pumpers required fewer persons to operate them. About this time, many of the larger cities changed from volunteer to paid fire departments. During the early 1900's, steam pumpers were replaced by gasoline fire engines. Since then, many improvements have been made in the equipment and methods used in fire fighting.

Recent developments. During the 1970's, the U.S. government encouraged fire departments to devote more time and money to fire prevention activities. In 1974, the government established the National Fire Prevention and Control Administration, which became the United States Fire Administration (USFA) in 1978.

The USFA serves as an information center for fire departments in the United States. It also develops new fire prevention and control techniques for use by local departments. It also operates the National Academy for Fire Prevention and Control in Washington, D.C. The academy develops training programs for fire fighters and others who work in the field of fire prevention and control.

False alarms have also become a serious problem. In some United States cities, a third or more of all alarms received by the fire department are false alarms. Some fire departments have removed alarm boxes from areas with a long record of false alarms. Other departments send fewer companies to answer alarms during peak false alarm periods.

A number of paid fire departments began to hire women as fire fighters in the 1970's. Women had served in volunteer fire departments since the 1600's but were not admitted into any paid departments until the 1970's.

Answer the questions:

1. What do we know about the development of fire-fighting in old Europe?
2. In what way did the early American colonists fight fires?
3. Who made efforts to establish a fire prevention system in the Colonies? What were they?
4. What did influence the development of fire departments in the mid-1800's?
5. In what way were fire prevention activities encouraged in the USA?
6. What are the functions of the USFA?
7. What has become a serious problem in some U.S. cities?
8. What do you think about the women admitted into fire departments?

VOCABULARY IN USE

1. Unscramble the words given in bold print.

1. **Serwnad** were the first in American records to engage in home fire inspections.
2. The praefectus vigilum, predecessor of the modern fire chief responded to **ginceesmeer** in his chariot.

3. A fire **notervinpe** ordinance prescribed fines for dirty chimneys.
4. The **sirnunace** companies were quick to investigate and prosecute.
5. **Hminecy** viewers who neglected their duties were to be fined 6 shillings and replaced.
6. The Great Chicago Fire emphasized the need for sound **sut-tonniccor** employing a minimum of wood and other **ballammef** materials.
7. The Franklin Fire Insurance Company **ceddelux** drug stores, flax and hemp dealers, liquor dealers, ship chandlers, coach and carriage builders, and dealers in varnish.
8. The Chicago fire followed a 14-week period of **toguhrd** and occurred during a windstorm later estimated to be of cyclone violence.
9. In 1889 the National Board of Fire Underwriters established a committee on fire departments, fire patrols, and water **lusupp** and began promoting fire **fatsey** work in the cities.

2. All the paragraphs in the text have been mixed up. Put them in the correct order and fill in the gaps, using the active vocabulary.

Fire Departments

a) Hundreds of years later, fire engines were equipped with p_____ operated by hand. These did not have much force and the streams of w_____ could not be thrown very far. Many colonial villages in the United States set up bucket b_____ when a fire broke out. Every man ran into the street with his b_____ and two lines were formed to the nearest water. B_____ full of water were passed along one line and thrown on the f_____. The e_____ buckets were passed down the other line to be filled. There was a great d_____ of fire in the colonial settlements. Houses were made of w_____ and had thatched roofs. They b_____ d_____ quickly.

b) The first fire brigades were organized many centuries before Christ. In 24 B.C. the Romans used slaves for f_____ f_____ and police work. The Romans also d_____ the first means of throwing a continuous stream of w_____ Roman f_____ used axes, blankets, buckets, ladders, and poles.

c) In the middle 1800's steam f_____ e_____ were first used. The steam boiler and p_____ were on a wagon pulled by f_____ or horses. In 1910 motor-driven f_____ e_____ came into use. By 1928 practically all horse-drawn e_____ had disappeared.

d) The problem of fighting f_____ has led to the growth of f_____ d_____. In the United States there are about 23,500 fire departments. Some of these have paid m_____. In smaller cities and towns the members are v_____ who serve without pay. About one out of ten of the 1,000,000 f_____ f_____ in the United States is a paid fireman working f_____ t_____.

GRAMMAR IN USE

1. Translate the sentences into English.

- 15 травня курсанти першого курсу поїдуть на табірні збори для навчання пожежній справі.
- На цьому тижні буде проходити науково-технічна конференція в нашому навчальному закладі.
- Зараз пожежні евакуюють дітей з палаючого будинку.
- Працівники випробувальної пожежної лабораторії разом з пожежною командою досліджують причини пожежі, яка сталася на передодні.
 - Послухайте, що ви робите у вітальні?
 - Я тут палю.
 - Тут палити не можна. Бачите, тут написано!
"Пам'ятайте, палити у коридорах, вестибюлях, на сходах, не можна, для цього є спеціально відведені місця."
 - Пробачте, але я тільки-но увійшов.
 - Це не міняє справи. Паліть тільки в спеціально відведених місцях. Взагалі, краще палити на балконі або вийти на вулицю.
 - Це моя провина. Я вибачаюсь і гашу цигарку.

2. Put the verbs in brackets into the correct form.

- 1) Airplanes (to spray) the fire with chemicals. Bulldozers and plows (to clear) a strip of land around the fire.
- 2) The firefighter (to turn) the nozzle and the spray (to concentrate) down to a stream.
- 3) He (to hurry) towards the fire exit.

DISCUSSION

1. Decide whether the following statements are true or false. If necessary - correct them.

Begin with:

- *I'm afraid that's wrong; you are not quite right;*
- *that's not quite so;*
- *I think, you are mistaken;*
- *as far as I know;*
- *on other contrary;*
- *I don't think so; according to the story.*

1. Vigiles never served as the police force.
2. You can't believe, but scholars know a lot about the development of fire-fighting in Europe before the Great Fire of London.
3. It's a pity, but insurance companies did nothing to protect their clients' property.
4. It's no use pulling down building next to the burning structure.
5. The wardens' chief's duty was to inspect chimneys for fire hazards and to patrol the streets at night and watch for fires.
6. Prominent citizens thought service in fire departments below them.
7. Hand pumps have never been replaced in the fire departments.
8. The USFA has nothing to do with the National Academy for Fire Prevention and Control in Washington D.C.

UNIT 9

MODERN FIRE DEPARTMENT

Reading and speaking

Pre-reading activity

Look at these headlines taken from different articles. What will you find out when you read the articles?

Professional Volunteer departments

Predominantly Volunteer Membership Corporations Commercial

Contract Fire Department

Special-purpose departments

Wholly Volunteer

Paid departments

These names can be sorted out into two groups. What groups?

JIGSAW READING

1. Get into two groups:

Group A is to read the text about Fire Fighting Organization

Group B is to read the text about Kinds of Fire Departments

Fire Fighting Organization

Fire departments, collectively called "the fire service" in the United States, are maintained by villages, townships, cities, or other governmental units, or by tax-supported fire districts. (Europeans speak of a unit as a "fire brigade," but they also use "fire service" as a collective term.)

Community departments may be fully professional, predominantly volunteer, or wholly volunteer. Fire fighting organizations also include the membership corporation, the commercial contract department, and special-purpose departments operated by industry or government agencies.

Professional. Communities of 10,000 or more in population commonly staff their departments with full-time employees. A typical professional department has a headquarters station (which may or may not house apparatus), a number of company fire stations strategically located, a large maintenance shop, a training center, and a communications or fire alarm center. The trend in larger cities is to combine administration, maintenance, training, and communications in a cluster of buildings. Operations of a paid city department are financed from general taxation.

Predominantly Volunteer. Communities with populations of roughly 2,500 to 10,000 are protected by departments that customarily are predominantly volunteer. The paid men maintain the apparatus, equipment, and stations, and upon receipt of an alarm go to the fire with the apparatus. The call men or volunteers respond from their

homes or place of employment and provide sufficient manpower to accomplish the needed tasks.

Wholly Volunteer. Rural or suburban areas below 2,500 in population operate departments that are usually staffed by truly volunteer personnel who are unpaid for their services. These men have banded together to help protect themselves and their neighbors against fire. They have a proud heritage of service and in many communities have become the leading social club as well.

To ensure their technical competence, these volunteers attend training programs operated by a state fire marshal's office, a vocational education department, or a firemen's association.

Membership Corporations. Taxing districts sometimes set up a membership corporation. This type of department owns its own buildings, apparatus, and equipment, and contracts its services to what may be termed "fire protection districts" or "contract districts." Usually the personnel is entirely volunteer.

Commercial Contract Fire Department.

A few fire departments—an insignificant number in the U. S. total - are of the commercial contract variety. They offer their services to subscribers as a profit-making business.

Kinds of fire Departments

The main kinds of fire departments are (1) volunteer, (2) paid, and (3) special purpose. About 27,000 volunteer and paid fire departments protect communities in the United States. Most of these departments are volunteer organizations. Special-purpose departments are maintained by certain government agencies and some private industries.

Volunteer departments provide protection mainly in small towns and rural communities. They are staffed by men and women who serve part time. Some departments have a few paid fire fighters but rely chiefly on volunteers. When a fire breaks out in the community, the volunteers leave their jobs or homes and rush to the fire station. In some departments, the volunteers are paid for their work, but in others they receive no pay.

Many volunteer departments have only enough equipment and volunteers for routine fires. In case of a major fire, departments from neighboring communities help one another. Most volunteer departments are headed by a fire chief, who is either appointed by the mayor or elected by members of the department.

Paid departments serve chiefly in larger cities. Some departments are organized on a county, district, or regional level. Paid departments are staffed by full-time fire fighters.

Paid fire departments in large cities have many fire-fighting companies, which operate from neighborhood fire stations. Each company is commanded by a captain or a lieutenant. Several companies make up a *battalion* or a *district*. Battalions may be further grouped into *divisions*. Large departments also have separate staffs that work in such areas as fire prevention, training, communications, and arson investigations. A fire chief, who is appointed by the mayor or some other city official, directs the entire fire department.

Special-purpose departments. The U.S. government maintains fire departments at all military bases and other large federal installations. These departments are trained to handle fires and other emergencies unique to a particular installation, as well as routine fires

Here are sixteen questions, eight for each text. Find the eight questions on your text and answer them:

1. What is a division and how is it structured?
2. When does department own its own buildings, apparatus, and equipment?
3. Who provides fire protection in small towns and rural communities?
4. When is a community protected by departments that are predominantly volunteer?
5. What are trained special-purpose departments for?
6. What has a typical professional department?
7. How do men and women in volunteer departments serve?
8. What is the name for a unit of a fire department in Europe? What do Europeans call the smallest unit in the fire service?
9. Who is a commander of each company in paid fire departments in large cities?
10. How is the operation of a paid city department financed?

11. Who appoints the fire chief of a volunteer department?
12. Can fire services be a profit-making business?
13. What do the volunteers do when a fire breaks out in the community?
14. How is participating in volunteer fire departments viewed in some rural or suburban areas?

VOCABULARY IN USE

1. Translate the words into English

пожежна команда

протидимний захист

шляхи евакуації людей

офіцер частини

кар'єрний шлях

пожежна профілактика

пункт пожежного зв'язку

пожежний підрозділ

керівник гасіння пожежі

горючий матеріал

надзвичайні випадки

рятувні методи

слідча група

2. Match the words in the left column with their explanations in the right column.

Fire department	A fireman who is not paid for his work in fire department
Fire control	An organization for preventing or extinguishing fires, especially a government division (as in a municipality)
Fire-warden	Is a building where fire engines are kept, and where firemen wait until they are called to put out a fire.
Volunteer	The control or extinction of fires.
A fire station	An official empowered to take measures against fires

3. Match the following synonyms if necessary, consult your dictionary.

the main kinds	to govern
to maintain	unit
rural communities	usual
to rush	salary

pay routine fire chief company to handle fires	fire commander to put out fires the basic types to run villages
------------------------------------------------------------	-----------------------------------------------------------------------------

4. Make up word combinations with the verbs and prepositions:

to speak of to rely on to pay for to finance from to respond from to protect against to staff by to appoint by to be commanded by to group into	a unit as a "fire brigade volunteers general taxation their homes their work fire men and women the mayor divisions a captain
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------

5. Match the sentence beginnings on the left with the endings on the right.

Air Force bases	train fire fighters to deal with radiation emergencies.
Forestry federal and state agencies	train fire fighters to battle aircraft fires
Nuclear power installations	maintain fire-fighting units to watch for and put out forest fires
Major airports	organize their own fire departments.
Industrial plants manufacturing fuels or explosives	have a fire department to fight aircraft fires

GRAMMAR IN USE

1. Translate the sentences into English.

1. Восени 1999 року вони проходили стажування у Великобританії.
2. Він збирався стати інженером пожежної безпеки, а став лікарем.

3. Вони гасили пожежу на комбінаті харчової промисловості в той час, коли горів будинок № 45.

4. На випадок пожежі на фортечних стінах протягом літа до великих снігів стояли діжки з водою.

5. У 1766 році в Харкові вводять посаду «атаман». Він стежив за тим, щоб у цехах дотримувалися протипожежних заходів, розподіляв, хто з пересічних громадян який інвентар використовує на пожежі.

6. У XIX сторіччі розросталося місто - зростала й кількість пожежних частин.

7. Від заснування й аж до 1944 року пожежна команда міста Луцька була розташована на території Луцького замку.

2. Open the brackets. Use the correct form of the verb.

1) Fire departments (to battle) fires in homes when another fire broke out in office buildings in a neighbouring street.

2) The men and women who (to work) for fire departments that evening also helped people trapped in cars after that disastrous accident.

3) Rescuers (to save) victims of flood so they (to need) the help of firefighters very much.

4) That person (to prevent) the fire by enforcing fire safety laws, but his colleagues knew little about fire hazards.

5) When a fire broke out, all the people in the community (to rush) to the scene.

6) In colonial America each fire battalion was commanded by a captain, 7 fire companies (to make up) a battalion.

7) In early 1800's departments didn't have staff that (to work) in such areas as fire prevention, training, and arson investigations.

3. Fill in the missing prepositions and adverbial particles.

<i>on(2) off of (4) in(2) by during</i>

(...) World War II, incendiary bombs dropped (...) some cities created "fire storms." These swept cities like violent windstorms, killing tens (...) thousands (...) people. (...) some cases, destruction (...) life and property by fire was greater than that caused (...) atomic

bombs. Often other bombs were dropped (...) the same time to destroy water mains and cut (...) the water supply. This made the work (...) the fire fighters more difficult.

DISCUSSION

1. Work in pairs.

Discuss the following questions together, and then tell the rest of your class what you think.

1. What changes have there been in the fire fighting organization of Ukraine for the past 300 years?
2. What does the USA do better in organizing their fire service in your opinion?
3. Is it a good idea to have paid and volunteer fire departments?

UNIT 10 FIRE FIGHTING EQUIPMENT

Reading and speaking

Pre-reading activity

Two friends are going on a hike. They have made-up a list of things which they will need in a camp. Look at this list. What tools will they really need? Use your dictionary to check up the words you don't know.

- ✓ a floodlight
- ✓ a ladder
- ✓ an electric generator
- ✓ a boat
- ✓ axes
- ✓ a carnival mask
- ✓ helmets
- ✓ a large hose
- ✓ a canvas tent
- ✓ rubber coats and boots
- ✓ a first aid box
- ✓ a saw

1. Work in pairs.

Look at the example and give a definition for any three items on the list.

Example: A first aid box is a box with different medicines and medical materials to be used in an emergency.

Ask each other what items could be used in fighting fires.

Do firefighters need a saw?

How do they use it?

Certainly, firefighters need saws!

For example, with the help of power saws they are able to cut through wooden doors.

3. Now read the text. Write down all the names of the tools and equipment used by firefighters.

Fireman's Tools and Equipment

Fire fighters need special tools for such tasks as forcing open locked doors or cutting through barred windows. Some every-day tools have been changed to meet the special needs of firemen. For example, fire axes are designed for cutting, prying, digging, and battering in addition to chopping. Firemen wear gas masks to protect them from smoke and fumes, and large, sturdy helmets for protection from falling debris. The helmets have broad brims that keep them from being drenched by water spray. Firemen also wear heavy canvas or rubber coats and rubber boots to keep from getting wet.

Firemen fight small fires with *booster* lines, or small lines of hose that look like large garden hoses. They use medium-size hose for fires in one or two rooms of a house, in a small store, or in some other limited area. Fire fighters use a large hose about 2 or 3 inches in diameter to battle flames in large buildings. Nozzles vary from small types that a man can hold in one hand to large *master-stream nozzles* that are mounted on trucks or extension towers. Master-stream nozzles sometimes require several large hose lines to supply enough water for a hard-hitting stream that will put out a big fire.

Ladders rank among the fireman's most important tools. Fire fighters use wood, aluminum, or steel *aerial ladders* with sections

that can be extended as high as 100 feet into the air. Firemen use the ladders in battling flames and rescuing persons trapped on upper floors. The bottoms of these ladders are attached to aerial-ladder trucks. A powerful motor on the trucks raises the ladders. The trucks also carry other ladders of various sizes that can be raised by hand.

VOCABULARY IN USE

1. Translate the words and word combinations into English:

пожежні інструменти	драбина з механічним
та обладнання	підйомником
пожежний рукав	одягати захисний костюм
обертова драбина	лафетний ствол
гідравлічна платформа	спринклерні системи
гумові рукавиці	присіднати рукав
аварійна посадка	високий тиск
механічна пила	пожежна техніка
мотопила	машина з підйомною
	платформою

2. Odd man out. In each line choose one word that doesn't belong to the group and explain why you think so:

- Fire axe – air pressure gauge – pump – hose – nozzle;
- ladder – hose connection – storage compartment – booster line;
- hammer – crowbar – axe – bolt cutter – fireguard – pike – power saw;
- Gas mask – protective gloves – asbestos mat – water-resistant boots – fire coat – heat reflective suit;

3. Unscramble the words given in bold print. Read the text.

Fire Fighting Equipment

Modern fire departments have engines which can **mupp** from 500 to 1,500 gallons per minute.

Usually a **mupper** has a water tank, different size **hesso**, fire **saex**, fire **hesserngtuixi**, **losnezz**, **osolt**, and other equipment. A fire company usually has an **lireaa** **derlad** truck with a power-raised

derlad that can reach up 65 to 100 feet or more. The truck also will carry long extension **desrlad** and scaling **desrlad**. There are also trucks with elevating **farlpmots** that serve as mobile water **woters**. They reach up to 85 feet or more.

There is special **tempunige** for breaking in doors. There are **wepro** saws, electric **tesagerron**, floodlights, **sent**, and rescue **tempunige**. Many fire departments have an oxygen resuscitator to revive anyone who has been overcome by **mesok**. They also have special **crusee** or "squad" trucks to supply electric **wepro** and light while fighting the fire.

Big cities and airports often have chemical trucks to fight fires. To prevent fires airport **shrac** trucks spread **maof** on a plane that is forced to make a **shrac** landing. Other trucks carry special chemical **hesserngtuixi** for oil fires and electrical fires.

For fires in docks and harbors, many fire departments have fire **sotab**. These have powerful **smupp** that can quickly pour water on a fire. They are used when a ship catches fire or when there is a fire near the harbor.

4. Make up the correct word combination:

- to extinguish foam
- to spread fire safety
- to teach flame
- to prevent for fire hazard
- to inspect fire

5. Match the tools with the truck which carries them:

fire axe fire extinguisher resuscitator nozzle hydrant intake aerial ladder floodlights power saw water tank electric generators scaling ladder	a ladder truck a pump truck (pumper)
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------

GRAMMAR IN USE

1. Translate the sentences into English.

Цей випадок спресував у собі всього 13 хвилин. У аврійно-рятувальну частину надійшло повідомлення про пожежу. Через 2 хвилини караул прибув на місце виклику. На подвір'ї його зустріли збуджені люди, які розповіли, що у квартирі, звідки йшов дим, сплять двоє дітей.

У кімнатах було повно диму. Коли пожежник взламавав сокирою двері до спальні, він почув дитячий голос. Один із пожежників у протигазі кинувся до колиски (у колиці плакала 2-х місячна дитина) і виніс її на подвір'я. Але у квартирі залишився 4-х річний хлопчик. Офіцер пожежної бригади з додатковим балоном кисню та ліхтариком у руках повернувся у задимлену кімнату, коли там горіли стіни і стеля. Він відшукав під ліжком зляканого хлопчика. Через тринадцять хвилин рятувальники ліквідували пожежу і доставили дітей до лікарні.

Потім з'ясувалося, що від необережного поводження з електрокип'ятильником загорілася тканина на дивані. Саме від цього під час пожежі і йшов ядучий чорно-зелений дим.

2. Put the verbs in the brackets into the correct form.

1. During that fire firefighters (to wear) protective clothing which (to include) helmets, knee-length coats, gloves and boots. The clothing (to protect) fire fighters from flames, water, and other job hazards.

2. – We need axes and crowbars!

– Wait a moment! Now our local fire truck (to carry) a variety of forcible entry tools, such as axes and crowbars

– It's a good news! Just look, we (to use) a portable ladder to break into a building or room!

3. In the past the equipment on fire trucks (not to include) first-aid kits, air cylinders and masks, and smoke ejectors.

4. Fireman used the ladders in battling flames and (to rescue) persons trapped on upper floors. A powerful motor on the trucks (to raise) the ladders.

5. The members of a ladder company (to spread) canvas or rubber covers over such property to prevent water damage, while the rescuers saved people trapped on the upper floor.

UNIT 11 FIRE FIGHTING APPARATUS

Reading and speaking

Pre-reading activity

What fire fighting apparatus do you know? How are these machines used in fire fighting? What kind of fire trucks should be improved in the near future?

Read the text and find the answers to the following questions in the text:

What equipment does the pumper have? How much water can it pump ?

What does the ladder truck carry? How long are the ladders on the ladder truck?

What special trucks do the fire companies have?

Fire Fighting Apparatus

The basic unit of fire fighting apparatus is the pumper. The second most common piece of apparatus is the aerial ladder truck. The proportion of pumpers to trucks varies according to the needs of the community.

Other vehicles commonly employed in the fire service include rescue, salvage, and searchlight apparatus and water tank trucks (generally referred to as "tankers"). Fire departments in cities situated alongside oceans, lakes, and rivers usually operate fireboats as well.

Pumper. The pumper is frequently referred to by U. S. fire fighters as the "engine," "rig", or "pump." In British terminology, it is the "appliance."

A pumper fully equipped and manned by three to six men is the basis of the fire fighting unit known as an "engine (or pumper) company." Variations of the standard pumper include grass and brush fire pumpers, expressway emergency units, and airport crash trucks. Crash trucks carry large quantities of dry chemical extinguishing agents. Their hose is generally limited to two small handlines because the major attack is made with large volume fixed turret nozzle.

Super Pumper. New York City employs the Super pumper - a tractor semitrailer that is a waterworks on wheels. The largest land unit ever designed for fire fighting, it can pump 8,000 gpm at 150 psi and is powered by a 600-horsepower diesel engine. The Super Pumper supplies water through 4 ½- inch hose either to several satellite hose turrets or to the regular fire fighting apparatus. It can be connected to several fire hydrants at once for water supply or can take water by suction from rivers.

Aerial Ladder Truck. To U. S. fire fighters, the aerial ladder is called simply "the truck"; in Europe, it is known as the "turntable' ladder." The U.S. version consists of a heavy-duty chassis on which is mounted a hinged metal ladder in sections capable of extension up to 100 feet (30 meters). European ladders are made with extensions up to 150 feet (45 meters).

Operation of the ladder is the same in all styles: a hydraulic pump driven by the vehicle engine provides power to raise the ladder to a vertical position, extend the sections to the required height, and rotate the ladder as required. When manned by three to eight men, these ladder units are referred to in the United States as a "truck company." In general fire department operations, a truck company responds with two to four engine companies at each alarm.

Elevating Platform. In the mid-20th century many departments in large cities adopted a new piece of fire apparatus - the elevating platform. From this platform, when it is raised high, streams of water may be directed on a fire by a nozzle at the top or by firemen standing on the platform. These platforms are highly maneuverable and may be used for rescue work.

Fireboats. Fire departments usually regard fireboats as special engine companies capable of supplying large volumes of water. Fireboats may fight ship or pier fires directly, or they may assist land companies by supplying large hose lines with water from a harbor or river. The boats are equipped with large pumps plus heavy turrets, nozzles, and quantities of large-diameter hose. Most modern fireboats are powered by heavy marine diesel engines (although some steam-powered boats are still in use).

Answer the questions:

1. What is the length of ground extension and aerial ladders? Give your answer in meters.

2. What does the pump truck have?

3. How much water can it pump in liters (1 imperial gal = 4,5 l; 1 gal = 3,7 l)?
4. What does the ladder truck carry?
5. What is the length of a ladder truck?
6. What special equipment does the fire company have?
7. What kinds of fireboats do fire departments usually use?
8. In what way are elevating platforms used for rescue missions?

VOCABULARY IN USE

1. Translate the following words into English:

технічне оснащення	попередження про небезпеку
поширення вогню	наявність ризиків
прибуття пожежної бригади	загроза життю
дослідження причин пожежі	знаходиться у небезпеці
брати на себе обов'язки	вентиляційна система
порятунок майна	аналізувати наслідки нещасного випадку

2. The following words you met in your new text. Check them in your dictionary and fill in the gaps in the sentences given below.

suction (n) engine(n) rig (n) crash (n) turret (n) jack(n)

A. Modern fire departments have ____ which can pump from 500 to 1,500 gallons per minute.

B. To prevent fires airport fire trucks spread foam on a plane that is forced to make a ____ landing.

C. These ____ are capable of operating on paved highways.

D. A fire pump can be connected to several fire hydrants at once for water supply or can take water by _____ from rivers.

E. The boats are equipped with large pumps plus heavy _____, nozzles, and quantities of large-diameter hose. Stability is provided by a heavy-duty ground _____ system

3. Odd man out. In each line choose one word that doesn't belong to the group and explain why you think so:

A) portable ladder – high temperature – turntable platform – storage compartment – supporting jack

B) fire fighter – pump – hose connection – extension ladder – booster line;

C) Aerial Ladder Trucks - Quads – Crash Trucks – Harvesters – Pumpers - Rescue Trucks – Fireboats

4. Match the words in the left column with their explanations in the right column:

A pumper	are quadruple, or four-purpose, trucks. They carry pumps, hose lines, ladders, and as much as 1000 gallons of water.
Crash Trucks	carry extension ladders that can be raised as high as 100 feet by powerful motors on the trucks. Some of them have four wheels, but the largest ones are six-wheel, trailer trucks.
Quads	carries hose, water tanks, and a pump that can shoot up to 1,000 gallons of water a minute through hose lines.
Aerial Ladder Trucks	serve the fire departments of airports. They are specially built to spray water or foam on burning airplanes.

GRAMMAR IN USE

Translate the sentences into English.

1. Під час пожежі насоси будуть перекачувати близько 4 тисяч літрів за хвилину, це допоможе гасінню.

2. Завтра на навчаннях ми будемо використовувати багато пристроїв та інструментів, особливу увагу ми будемо приділяти захисно-дихальній апаратурі.

3. Головним завданням рятувальника на пожежі було, є і завжди буде рятування людей на пожежі.

4. Пожежники використовують захисний одяг: каску, гумові чоботи, пожежний костюм, рукавиці.

5. Адміністрація пожежної частини складатиме графік інспектування наступного тижня.

6. Інспектор попереджуватиме мешканців будинку про мету проведення інспектування, яке буде проходити наступного місяця.

7. Інспектор подасть письмовий рапорт своєму начальникові.

8. При перевірці інспектор вказує, яких заходів необхідно вжити, щоб попередити пожежу.

DISCUSSION

The article below tells us about some difficulties in fire truck maintenance. Read it and get ready to discuss these problems.

Fire Apparatus Design

Modern fire apparatus has greatly increased in length, width, height and weight. These factors have created some unique problems. Blindspots are created on some vehicles and affect right-hand turns and backing of the vehicle. Whenever possible, avoid backing apparatus. It is normally safer and quicker to drive around the block. There are situations where it is necessary to back apparatus and, when it is essential, backing should be done with utmost caution. Never back an apparatus without at least one man on foot to clear the way and direct the driver. This practice also applies when backing into a fire station. In some situations two firefighters to direct the driver is preferred. Such would be the case when trying to turn an apparatus completely around (180°) under the stress of an emergency on crowded, narrow streets. This type maneuver is usually not needed since, once again, driving around the block would be faster and easier. Depending on the design, some aerial equipment will have overhang problems either in front or rear. be extremely cautious not to ram the aerial tip, elevating platform or bucket into overhead wires, trees or other obstructions.

Work in the groups of four to prepare and act out a role play. You are to discuss how to improve fire fighting machines. Use four roles given below:

Role 1. A firefighter. – You want to have powerful and easy in maintenance fire truck. You are to listen to all your “colleagues” and give your opinion concerning the subject..

Role 2. A designer of the fire truck. – You have some new ideas as for fire truck design. You want to discuss advantages and disadvantages of your future vehicle (a new make of automobile).

Role 3. A shop assistant of a supermarket. – You think that there is no sense to design new fire trucks. Some special - purposed trucks can be converted into ‘fire’ trucks and equipped with the help of special fire fighting tools and equipment.

Role 4. A manager at the National Firefighting Apparatus Corporation. – You are dead sure that fire machinery produced at the plants nowadays need some improvement but should not be equipped at supermarkets.

Work together to devise a new design of a “super” fire truck. Supply the chart and description of your truck.

UNIT 12 FIRE FIGHTERS IN ACTION

Reading and Speaking

Pre-reading activity

1. You will see the following words in your new text. Check them in your dictionary and fill in the gaps in the sentences given below.

to ventilate to chop

to use to let out to report to treat

to need to rush to receive

1. Fire fighters _____ a building by _____ holes in the roof, if necessary. Ventilation (_____) smoke and gases that (to build up) during a fire that could (to cause) an explosion.
2. Fire department paramedics (_____) persons (_____) emergency medical care and (_____) them to a hospital.
3. The alarm headquarters of a fire department (_____) all alarms (_____) the outbreak of a fire.
4. All three trucks – an elevating platform truck, a pumper, and an aerial ladder truck – (_____) to spray water on a fire.

Read and translate the text. Answer the questions given after the text. Get ready to make a retelling of the text in the name of a seasoned fire-fighter.

Fire Fighters in Action

The two basic fire-fighting units in most fire departments are engine companies and ladder companies. Engine companies operate trucks called pumpers, which carry a pump and hoses for spraying-water on a fire. Ladder companies use ladder trucks, which carry an extension ladder or elevating platform to rescue people through the windows of buildings. Ladder trucks also have other rescue equipment and fire-fighting tools. In most large cities, each neighborhood fire station has at least one engine company and one ladder company. At a fire, the members of the engine and ladder companies work together as a team under the direction of an officer.

Fire departments must handle many types of fires. Each type requires a different plan of action to put it out. For example, the methods used to fight a building fire differ greatly from those used to fight a

forest or grassland fire. The following discussion describes how fire fighters battle the two types.

After an alarm is received, the engine and ladder companies speed to the fire. They often arrive within a few minutes after receiving the alarm. The officer in command quickly sizes up the situation and directs the fire fighters into action.

The members of the engine company first connect a hose from the pump to a nearby fire hydrant. Then they stretch hose lines from the pump to the building on fire and try to locate the fire within the building. Their first concern is to keep the fire from spreading. The fire fighters spray water on any nearby buildings that are in danger of catching fire. Then they direct water on the fire itself until it is out. Meanwhile, the members of the ladder company search for people who may be trapped in the building. In some buildings, they use ladders to rescue people through windows. However, the ladders on most trucks extend up to only about eight stories. Fire fighters must use elevators or stairs to get to persons trapped on floors above the reach of the ladders. Ladder company members ought also to ventilate the building to let out the smoke, heat, and gases that build up during a fire.

They open or break windows and sometimes cut holes in the roof or walls. If the building were not ventilated, the heat and the pressure of the gases could cause an explosion.

The ladder company tries to save any furniture or other property not damaged by the fire. The members spread canvas or rubber covers over such property to prevent water damage. Finally, the ladder company searches the building for hidden sparks that might cause another blaze.

After the fire is out the fire fighters try to find out exactly where and how the fire started. The officer in charge makes out a report that gives all the important facts about the fire. The report includes information on the number of persons killed, if any; the cause of the fire; and the estimated cost of damage.

Answer the questions:

1. What is the basic fire-fighting unit?
2. What are these basic units equipped with?
3. What rescue equipment and fire-fighting tools do they have?

4. Who works as a team at a fire?
5. What kind of fires must fire department handle?
6. Why do firemen require a plan of action to put a fire out?
7. Who directs the fire fighters into action?
8. What is the first concern of the members of the engine company?
9. What do they do to fulfil it?
10. Who tries to save any furniture or other property not damaged by the fire?

VOCABULARY IN USE

1. Translate the words and word combinations into English:

сигнал про пожежу	поширення вогню
прибуття пожежної бригади	загроза життю
дослідження причин пожежі	знаходиться у небезпеці
брати на себе обов'язки	підключати до джерела
порятунок майна	аналізувати причин пожежі
ретельний огляд техніки	

2. Match the words in the left column with their explanations in the right column.

fire alarm	is a large vehicle that carries fire men and equipment for putting out fires.
fire-raising	takes place in a particular building, the people who work or live there practice what to do if there is a fire.
a fire engine	is a device that makes a noise, for example with a bell, to warn people when there is a fire.
a firecracker	is a firework that makes several loud bangs when it is lit.
a fire drill	is the act deliberately starting a fire in order to damage or destroy something usually a building.

3. Translate the words in brackets into English. Read about some useful points on fire fighting.

Fire Fighting

(Пожежа) should be extinguished with as little (вода) or extinguishing agent as possible. We must lessen runoff water, which

can spread (радіоактивні речовини), rather than for reasons of critical (небезпека). Water runoff can be (контрольований) by dams, dikes or a channel into a retention tank or reservoir. In some cases the runoff can be diluted by flushing with (пукав) streams.

Fire fighting (вентиляція) should be kept to an absolute minimum. Some ventilation may be necessary to (запобігати) explosions or to channel (тепло та дим) out of a (будівля). Under certain conditions, it may be appropriate to shut down the ventilation (системи) to limit (розповсюдження) of contaminants; in other (ситуації), it is best to leave them on.

GRAMMAR IN USE

1. Translate the sentences into English.

1. Три відділення пожежно-рятувального підрозділу вже прибули на боротьбу з вогнем.

2. Слідча група виявила, що причиною пожежі стало необережне поводження з вогнем відпочивальників, які розвели вогнище у лісі.

3. Нещодавно вогнеборці врятували 60 осіб з павільйону та зберегли матеріальних цінностей на суму 250 тис. гривень.

4. Щойно рятувальники знайшли людей у підвальному приміщенні і негайно вивели їх на свіже повітря.

5. Штаб ліквідації надзвичайних ситуацій працює на місці аварії з цього тижня.

2. Put the verbs in brackets into the correct form:

1. Modern fire apparatus greatly (to increase) in length, width, height and weight. These factors (to create) some unique problems.

2. Since 1922, the First National Fire Prevention Week, public education programs (to become) important supplements to fire prevention laws and inspection programs. Many such programs operate the year around.

3. Administration in the U.S. space program (to improve) reflective clothing materials for operating in high heat and (to lead) to improved breathing apparatus for working in toxic smoke atmospheres.

4. Fire departments (to make) many significant contributions to improve fire fighting methods through individual efforts to correct pressing problems. Individuals (to lead) the way toward larger hose

diameters (up to 6 inches) for moving large quantities of water, the use of portable water storage tanks and improvement of water carrying vehicles for areas lacking readily available water supplies.

DISCUSSION

1. Decide whether the following statements are true or false. If necessary – correct them. Begin with:

- *I'm afraid that's wrong;*
- *you are not quite right;*
- *that's not quite so;*
- *I think you are mistaken;*
- *as far as I know;*
- *on the contrary;*
- *I don't think so;*
- *according to the text.*

1. Fire companies ready to respond to an alarm are said to be “out of service .” When responding to or actively engaged in fire duties they are "in service”

2. Uninformed persons believe that ventilation causes needless damage, but skilled fire fighters know that it saves a building in nearly all cases.

3. The chief officer in command first determines whether any lives are endangered.

4. Rescue is usually undertaken by the personnel of a ladder company and rescue company when the engine companies have stretched hose lines to the scene and hooked up their pumpers to the water supply.

5. What fire fighters call "back draft" can cause explosions in unventilated or improperly ventilated buildings.

2. Make up the standard plan of action on a fire scene. Use the prompts:

- ✓ confine the fire to the area it flames
- ✓ find the precise location of the fire
- ✓ rescue any endangered occupants of the building
- ✓ search out and extinguish all hidden flames
- ✓ declare the fire out
- ✓ attack and extinguish the fires

CHECKING TASKS FOR UNITS 8-12

1. Fill in the gaps, using the active vocabulary

In a big-city fire d_____, several fire companies are grouped into districts or battalions. They come under the command of a district chief or battalion chief. In many c_____, several districts or battalions may be commanded by a deputy chief or assistant chief. The fire chief s_____, the entire fire department.

Most f_____ a_____ reach the fire department by telephone calls. Red fire-alarm b_____ stand on street corners in most large cities. When the l_____ of the box is pulled, it sends a s_____ to alarm headquarters, a branch of the fire d_____. The signal tells the men at h_____ the street corner from which the a_____ came. As soon as an alarm is turned in, the alarm-room dispatcher alerts the nearest f_____ c_____ to go to that location.

The number of t_____ sent out on the first alarm depends on the location of the fire. More units go to a f_____ that e_____ many lives, such as a b_____ in a school, nursing home, or factory, than go to one that does not. If the f_____ is too big for the fire fighters to handle, the o_____ in charge sends in a second or third a_____, or more if necessary. With each a_____, more fire companies rush to the fire.

Some cities have special telephones on street c_____, instead of f_____ -a_____ b_____. When someone lift the telephone, a light appears on the s_____ at alarm headquarters. The person reporting the f_____ can talk directly to the alarm-room o_____.

3. Translate into English:

Наприкінці XIX століття в багатьох великих містах почали з'являтися перші автомобілі. До них стали виявляти значний інтерес різні служби для своїх потреб. Однією з перших була пожежна служба. Усе пожежне устаткування: цистерни з водою, багри, драбини, насоси й рукави - доводилося в той час возити громіздким і недостатньо швидким кінним обозом. Пожежники мали потребу в більш швидкохідному та потужнішому виді транспорту, ніж гужовий, і не менш надійному. До середини двадцятих років механічна тяга, як тоді говорили, витиснула в пожежній справі кінну. І сьогодні головним засобом доставки

пожежників і устаткування для боротьби з пожежами в населених пунктах є автомобілі.

10 червня 1904 року фірма «Фрезе» побудувала перший у Росії пожежний автомобіль із 9-сильним одноциліндровим двигуном «Де Діон-Бутон», призначений для транспортування команди з 10 осіб. До комплекту лінійки входили дві пожежні драбини, стендер і 80 сажнів рукавів. На цьому автомобілі фірма востаннє використала одноциліндровий двигун і охолодження за допомогою оребреного змійовика. На лівому борту автомобіля були прикріплені дві таблички: одна з найменуванням виробника («Фрезе і К'»), друга - з посиланням на приналежність до Олександро-Невської пожежної частини. Привод на ведучі задні колеса здійснювався за допомогою ланцюгової передачі. Потужність двигуна становила вісім кінських сил. Замість суцільних гумових шин, що їх установлювали на вантажівках «Фрезе», лінійка мала пневматичні. Біля місця командира пожежного відділення, розташованого поруч із водієм, була невеличка аптечка для надання першої медичної допомоги потерпілим. Цікавим є той факт, що в день одержання машина була відразу ж використана для гасіння пожежі. Пожежний автомобіль прибув до місця події на 12 хв. швидше, ніж кінний обоз, і довів свою практичність.

4. Put the verbs in brackets into the correct form.

Most of the alarms answered by firemen (to involve) fires in early stages that (to train) men using modern equipment . Between alarms, fire fighters (to check), (to test), and (to maintain) their equipment so that it (to be) always in perfect working condition. They also (to study) new fire-fighting techniques and (to practice) skills they have already (to master). When the alarm (to ring), the company (to dash) to battle a great, roaring blaze. For hours, the men (to subject) to intense effort and danger as they (to fight) the flames.

UNIT 13 FIRE EXTINGUISHERS

Reading and speaking

Pre-reading activity

1. What is a fire extinguisher?
2. What do you know about different kinds of fire extinguishers? How do we operate them?
3. How are fire extinguishers classified by their contents?
4. Have a look at the words given in the box. Which of these substances can be used as the contents of fire extinguishers?

gas liquid dry powder foam water oil

Read the text using the list of the new words and check your answers after that.

a film - плівка

the liquid - рідина

dry- сухий

to conduct - проводити

a lever - ричаг

a hand pump - ручний насос

to shoot - вистрілювати

to deposit - розміщати

the multipurpose - багатофункціональний

pressure - тиск

combustible – горючий

Fire extinguishers

Fire extinguisher is a metal container filled with water or chemicals used to put out fires. Fire extinguishers are portable and easy to operate and can be used to put out small fires before the flames spread.

There are many kinds of fire extinguishers. The kind used depends on the type of fire involved. Fire prevention experts divide fires into four classes—A, B, C, and D—depending on the burning

material. Class *A* fires involve such materials as cloth, paper, rubber, or wood. Class *B* fires involve flammable gases or such flammable liquids as cooking grease, gasoline, or oil. Class *C* fires involve motors, switches, or other electrical equipment through which electric current is flowing. Class *D* fires involve combustible metals, such as magnesium chips or shavings. Most extinguishers are labeled with the class, or classes, of fire for which they can be used. Class *D* fires require special extinguishers designed for specific metals.

But most other fire extinguishers can be classified, by their contents, as one of four types; (1) water, (2) foam, (3) liquefied gas, and (4) dry chemical.

Water extinguishers are used to fight only class *A* fires. Water conducts electricity, and so it must never be used on a fire involving electrical equipment. A water extinguisher is operated by a lever or a hand pump that shoots the water through an attached hose.

Foam extinguishers are used for class *A* and class *B* fires. They contain water and a foaming agent. One type of foam puts out fires that involve combustible liquids by depositing a film between the liquid and the flame.

Liquefied gas extinguishers may be used on class *B* and class *C* fires. There are two main kinds—*carbon dioxide extinguishers*, which contain carbon dioxide gas; and *Halon extinguishers*, which contain a gas called *Halon*. Larger Halon extinguishers can also be used to fight class *A* fires.

Dry chemical extinguishers are used on class *B* and class *C* fires. One type, the *multipurpose dry chemical extinguisher*, also can be used against class *A* fires. Dry chemical extinguishers contain a chemical powder and a gas under pressure.

1. Here are answers to the questions. What are the questions?

1. _____? - Depending on the burning material
2. _____? - Involve motors, switches, or other electrical equipment through which electric current is flowing.
3. _____? - In about 1837.
4. _____? - The gas in liquid form under pressure in the container.

5. _____? - Aluminium sulphate mixed with a sodium bicarbonate water-based solution to generate pressure.
6. _____? - Effective on Class A fires.
7. _____? - Involve flammable and combustible liquids, greases, and similar materials.
8. _____? - A sodium bicarbonate, potassium bicarbonate, or potassium chloride base.

2. Give the answers without consulting the text:

- 1) How many classes of fires do you know?
- 2) How do we classify the fires?
- 3) What is fire extinguisher?
- 4) Why do we need the fire extinguisher at home and at work?
- 5) How is the fire extinguisher labelled?
- 6) What do you know about different kinds of fire extinguishers?

VOCABULARY IN USE

1. Read the new words; give the missing translation.

To contain - _____; container - ємність; contents -

_____ to fill - заповнювати; filler- _____

to operate - використовувати, експлуатувати; operator-

_____ to divide - ділити; division - _____

chemicals - хімічна речовина; chemistry- _____

to put out - гасити, гасити пожежу- _____

portable - переносний, переносний вогнегасник -

_____ to spread - розповсюджувати, розповсюджувати полум'я -

_____ to depend on - залежати від, залежати від типу пожежі-

_____ to involve - залучати, залучати різні матеріали-

electric current - електричний струм; водяний струм-

magnesium chips - дрібні уламки магнію;

дрібні уламки деревини - _____

to label - маркувати; марка - _____

2. Make the sentences from the words

This ; fill; container; water; I; by.

Portable; he; fire; can't operate; extinguisher; his.

The; depends on; fire; type of ; extinguisher; fire.

Involved; paper, fire, wood; and.

3. Translate into English:

1. Тип вогнегасника залежить від типу пожежі.

2. При пожежі класу А горять такі матеріали, як тканина, папір, гума чи деревина.

3. Більшість вогнегасників марковано тією буквою пожежі, на якій вони можуть бути використані.

4. Вогнегасник може бути використаний, щоб загасити невеликий вогонь до того як полум'я почне розповсюджуватися.

4. There are four classes (A,B,C,D)of fire extinguishers. Match the class of fire extinguisher with the class of fire:

- CLASS ___ - energized electrical equipment, such as wiring, fuse boxes, appliances.
- CLASS __ - ordinary combustibles, such as wood, cloth, paper, rubber.
- CLASS ___ - combustible metals, such as magnesium.
- CLASS __ - flammable liquids, such as gasoline, oil, solvents, oil-based paints.

5. Arrange the steps when operating an extinguisher in the correct order.

Aim low; point at the base of the fire

Sweep from side to side keeping the extinguisher aimed at the base of the fire

Pull the pin.
Squeeze the handle.

6. Fill in the gaps in the sentences :

1. To operate most extinguishers, a person _____ the locking pin and _____ the operating lever.
2. Water extinguishers are _____ with water.
3. Foam extinguishers contain water and a _____.
4. _____ extinguishers contain either carbon dioxide gas or a gas called *Halon*.
5. Dry chemical extinguisher contain a _____ .

GRAMMAR IN USE

1. Translate the sentences into English.

1. У новому будинку відпочинку пожежники вже встановили в минулому році необхідну кількість вогнегасників для кожного поверху та приміщення.

2. Вчора старшина провів тренування з використанням приладів пожежогасіння до того, як ми виїхали на ліквідацію пожежі.

3. У Франції вчені нещодавно запатентували вогнегасники із пластмасовим корпусом.

4. Компанія у 2004 році розробила новий вогнегасник, який дослідники вже тоді випробували в лабораторії.

5. Рятівники і робітники лісгоспу зупинили стрімке поширення полум'я. Майже годину вони витратили на остаточну ліквідацію пожежі.

6. Люди залишили палаючий будинок до того, як прибула пожежно-рятувальна бригада.

2. Put the verbs in brackets into the correct form.

In 1825 a fire in Maine and New Brunswick, Canada, (to burn) over 3,000,000 acres of forest land.

One of the worst forest fires in history destroyed the town of Peshtigo, Wisconsin, in 1871. The fire (to start) in the woods after a long period of drought. When a strong wind (to start), it quickly (to

carry) the fire through the dry forest. Within four hours the fire completely (to cover) an area 40 miles long and 10 miles wide. This (to include) all of Peshtigo and several smaller villages.

Fire prevention laws with building regulations (to begin) long before modern fire departments (to appear).

Many Roman emperors (to establish) already fire prevention laws in ancient times. About 18 B.C., the Roman Emperor Augustus (to set) maximum heights for houses and minimum thicknesses for their walls. Later laws (to require) minimum separations between buildings to prevent fires before it (to spread) from one structure to the next.

3. Put the verb to be into the correct form and read the text.

In many cases, water (not to be) an appropriate extinguishment. For instance, where electrical equipment (to be) involved a gaseous agent (to be) the obvious solution.

One such option (to be) Carbon Dioxide economical, colourless, odourless and electrically non-conductive—perfect for the protection of vital services. Like any extinguishing system, a Carbon Dioxide installation (to be) checked and maintained on a regular basis.

4. Fill in the missing preposition and adverbial particles given in the box .

Out by far at along in with on of into over

Fighting Fire

Some fires are harder to put ... than others. Water can put ... wood and paper fires ... lowering the temperature. Water will not put ... an oil fire because oil will rise ... top of water and continue to burn. Sand and dirt may be used ... small oil fires. Water fog, foam, dry chemical, or soda acid extinguishers are also used. Foam or some kind of vapor put ... top of the oil fire will smother it ... keeping ... the oxygen it needs to burn.

Electrical fires may be put carbon dioxide, dry chemical, or vaporizing liquid extinguishers. These are used because they do not conduct electricity. Water is not used because it is a conductor.

Hand fire extinguishers are used only ... small fires. ... the United States, extinguishers are examined ... the Underwriters' Laboratories ... Chicago, Illinois. Every extinguisher should have a label that tells the kind and size of fire it will control. Only extinguishers approved ... the Underwriters' Laboratories should be used.

DISCUSSION

1. The article below tells us about new trends in portable fire extinguisher design. Look at the picture, read what people say about it and answers of the designer. Get ready to discuss these problems, agree or disagree.

Designer: - For my design studio I am redesigning a fire extinguisher. I did this board for my mid crit and thought it was fun. This project is still in progress: this board was done for a presentation midway through the process. It is one hand use and a pin will be added. I was just trying to work out the overall form of the object. I still have to design a label, work out some details, and make either a physical or compute model.

- I was thinking about when fire extinguishers are used. It seems like mine would be hard to aim under stress. What about rethinking the general form? Maybe change the tank from vertical to horizontal so you could just point the whole unit at the fire like a hose. Just a thought...

- Looks like a kinda wine bottle... In most emergency situations, overstyling becomes a hinderance to efficient use. I suggest that you concentrate on the pure ergonomics and functionality of the design before trying to beautify it. There is a huge platform for a more funtional/efficient design for this product. - Could you indicate the size of the thing and how does it indicate it's pressure level to the user? - Have you thought through the color? it does indicate what fire type it is for.

Designer: There are two reasons that the head is pointing down at a 15 degree angle; This way the relatively heavy canister can hang plum while the user puts out a fire 6 feet away from themselves as well as aligning the wrist and forearm when the unit is held below the waist (as most of my users who I filmed using extinguishers did in fact hold

it). However my professors have pointed out that the former is only a useful feature if the fire is in-fact on ground level. so perhaps a compromise angle might be best. Thank you for some very helpful criticism.

UNIT 14 FIRE PREVENTION AND FIRE SAFETY

Reading and speaking

Pre-reading activity.

1. Sort out the words according to the sphere where they can be used:

Public Building Inspections	Home Inspections
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to inspect a private home; a theatre; home safety program; a department store; what to do if a fire breaks out; a school; to check the heating and cooking equipment; materials that burn easily; to require portable fire extinguishers; fire exits; to enforce the code; to check the electrical equipment; overloading electrical outlets; to review plans for a new building; a fire safety code; running electrical cords under a rug; to practice fire drills

2. There are three main methods of Fire Prevention and Fire Safety:

(1) laws and regulations, (2) inspection of buildings and other property, and (3) public education about fire safety. Read the title and headings of articles and say what methods are discussed in them: *Arson Investigations. Heat detectors. What to Do in Case of Fire.*

Read the text using the word list given below.

Fire Prevention and Fire Safety

To help prevent fires and reduce fire losses, local fire departments of the USA inspect public buildings and private homes. They also teach people about fire safety and conduct *arson* investigations.

Public Building Inspections. Most cities have a fire safety code that applies to such buildings as theatres, department stores, schools, and hospitals. Under these codes, the buildings may not be constructed of materials that burn easily. The codes also require portable fire extinguishers, a certain number of exits, and other fire

safety features in public buildings. Fire department officials inspect public buildings from time to time to enforce the local code. The officials check the condition of the electrical equipment and the heating system. They note the number and location of exits and fire extinguishers. The inspection also covers housekeeping conditions and many other matters that affect fire safety. Fire department inspectors may also review plans for a new building to make sure it meets the safety code.

Home Inspections. Most of the deaths caused by fires occur in private homes. For this reason, many fire departments have home safety programs. In the USA a fire department will send a fire fighter to inspect a private home if asked by the owner. After the inspection, the fire fighter recommends ways to make the home safer from fire. During home inspections, fire fighters check the heating and air-conditioning systems and the cooking equipment. They look for unsafe practices, such as overloading electrical outlets or running electrical cords under a rug. The fire fighters also instruct families on what to do if a fire breaks out. To leave the home safely and quickly in case of fire, families are advised to make escape plans and to practice fire drills.

Most fire departments advise to install *smoke detectors* in their homes and offices. Smoke detectors are devices that sound an alarm if smoke builds up in a room. The devices are attached to the ceiling or wall in several areas of the home. Most home fires that result in deaths occur at night when the family is asleep. Smoke detectors will awaken the family before the fire and the smoke build up to the point where escape is impossible. *Heat detectors*, which sound an alarm if the temperature rises to a certain point, are also available. However, smoke detectors generally give an earlier warning than do most heat detectors. Fire departments also recommend that people have portable fire extinguishers in their homes and offices. A person must be sure, however, to use the right kind of extinguisher for the type of fire involved. For example, a water extinguisher cannot put out a grease fire. Such a fire can be fought with a special gas extinguisher.

Public Education Programs. Many fire departments work with other local agencies to teach people how to prevent fires and what procedures to follow during a fire. In some communities, fire department officials serve as instructors or advisers in fire safety courses in the schools. They also supervise school fire drills.

Arson Investigations. Arson is the crime of purposely setting fire to a building or other property. Many fire departments have a squad of specially trained investigators who gather evidence in cases where arson is suspected. Fire department officials in some cities estimate that nearly half the fires in their cities are purposely set.

1. Find in the text the following word combinations:

Певна кількість виходів; у випадку пожежі; з цієї причини; що робити, якщо розпочнеться пожежа; речі, які впливають на пожежну безпеку; під час інспекції.

2. Answer the questions

1. What do you have to do to reduce or eliminate the risk of financial loss through fire?
2. What do you know about a fire safety code?
3. Why do the fire department officials inspect public buildings from time to time?
4. What do fire fighters do during home inspections?
5. What must you do in case of fire?
6. What do most fire departments advise people to install?
7. Why do many fire departments have a squad of specially trained investigators?
8. What do you think about Public Education Programs?

VOCABULARY IN USE

1. Read these "pseudo friends of translators", write their translations and translate the word combinations given below:

Private	public buildings and private homes
code	a fire safety code ; under these codes
officials	Fire department officials
to affect	The officials check the electrical equipment
check	They note the number of exits fire extinguishers.
note; to note	matters that affect fire safety

2. Read the words, find the prefixes in them. Give the missing translation of the following words. Pay attention to the prefixes.

usual - звичайний, незвичайний - unusual

safe - безпечний, unsafe -

дозований - dosed, передозований - overdosed

loading - навантаження, overloading -
 view - дивитися, review –

3. Make up word combinations:

to prevent - запобігати	plans for a new building
to reduce - знижувати	fires
to conduct - проводити	the code
to inspect - інспектувати	public buildings
to enforce - доглядати за дотриманням	fire losses
to review - оглядати, переглядати	
to practice - практикувати	fire drills
	investigations

4. Make up as many word combinations as possible with each of the verbs.

To make	Sure
To check	air-conditioning systems
	the home safer
	electrical cords
To run	escape plans

5. Match each of the following fire safety terms with its definition:

Smoke detector	a device worn over the face to protect a person from breathing in poisonous (= toxic) gases.
Fire alarm	a long, flexible pipe made of rubber or plastic through which water is propelled.
Fire escape	an instrument used to find the presence of smoke which activates automatically when it detects smoke.
Gas-mask	a device used to spray water like that in a shower cabin.
Fume	a system which lets a fire brigade know about the outbreak of a fire.
Hose	a stairway on the outside of a building down which people may run away from a fire.
Sprinkler	strong and unpleasant or harmful (= dangerous) gases, smells or smoke.

6. Make the sentences from the words.

1. The most effective manner in which to fight fires is to prevent them from starting.
2. Effective fire prevention and public education programs are the best way to minimize the hazards of fire in the community.
3. The cornerstone of any fire prevention program must be an aggressive inspection program.
4. A carefully planned inspection program carried out by conscientious, well-trained personnel can reduce the risk of many serious fires.
5. No emergency contact with civilians also gives the fire department a chance to build or reinforce a good public image.

GRAMMAR IN USE

1. Translate the sentences using the word combinations:

to apply to smth. - застосовувати до чогось, для чогось

to be constructed of smth. - складати з чогось

to look for smth. or smbd. - шукати щось чи когось

to instruct smbd. on smth. - інструктувати когось з чогось

Ми застосовуємо хімічну речовину для цього експерименту.

Офіцер шукав уламки електричного обладнання на пожежі.

Одяг пожежників не повинен складатися з матеріалів, які легко горять.

Керівник інструктує працівників офісу з питань пожежної безпеки кожний день.

2. Translate the sentences into English.

1. Пожежа може вбити велику кількість людей і завдати великих збитків будівлям.

2. Усі повинні добре знати правила пожежної безпеки.

3. Інспектор повинен виявити небезпечні умови праці на об'єкті.

4. На цьому тижні пожежному інспектору слід буде добре перевірити вентиляційну систему нашого офісу.

5. Адміністрація пожежної частини змушена була скласти графік інспектування навчальних закладів.

6. Командир пожежно-рятувальної бригади може проводити навчання протягом усього тижня.

7. Пожежник повинен знати і розуміти природу стихійного лиха, щоб вміти боротися з ним.

3. Open the brackets.

1. The fire fighters must (to drain) the hose and (to put) it back on the trucks. They also must (to inspect) equipment and tools so they (to be ready) to use again.

2. Heat-reflective suits are worn by fire-fighters in special cases when they have (to walk) through flames.

3. The fire chief keeps in touch with the fire department headquarters so that he can (to get) more men or equipment if he (to need) them.

4. The fire insurance contract may also (to be written) to include an extensive list of perils in addition to fire.

5. Fire fighters must (to use) elevators or stairs to get to persons trapped on floors above the reach of the ladders.

6. Ladder company members ought also (to ventilate) the building to let out the smoke, heat, and gases that build up during a fire.

7. A variety of protective gear may (to be) necessary to provide maximum protection in the many different situations.

8. All departments should (to be) aware of the type of equipment needed for different exposures and have the equipment readily available.

DISCUSSION

Read the text. Discuss what you will do during a fire emergency.

During a Fire Emergency

On hearing a fire alarm, the first life safety survival tactics begins before opening the door. Instruct students to do the following:

Feel the top of the door with the back of a hand for heat. If it is not hot, open the door slowly while looking into the corridor at a level below the doorknob to avoid breathing in any smoke that may be present. If there is light smoke and no heat, crawl low to the exit and evacuate from the building, counting the number of doors to the stairwell. Take your room key with you. If you encounter heavy smoke and heat in

the stairwell, use the alternate stairs, or go back to your room and follow steps A through D below.

After feeling for heat at the top of the door, feel the doorknob. If the doorknob is hot, do not open the door.

a) Stuff wet towels and clothing under the door. Continue sealing around the doorframe. If possible, continually wet the cloths.

b) Call 911. Give the exact location of the building - floor level and room number - and the number of people in the room.

c) Wave a white towel or clothing out the window to signal for attention.

d) If light smoke comes into the room, open double-hung windows six inches from the top and bottom. Breathe air from the bottom of the window. If the window is of the crank-out or slide type, open it a few inches. Do not break the glass. Fire and smoke from a fire below may enter the room.

Know the locations of the nearest exit (stairwell) and the alternate exit from your room.

Count the number of corridor doors to the exits to the left and right of your room, to assist you in locating the stairwells if and when you encounter smoke as you crawl low in the corridors.

After evacuating from the building, report to your designated area for an accountability check by the RA

You are a school fire safety instructor. Make up instructions what to do in case of fire using words below:

1. building the immediately leave.
2. open feels a that hot never door.
3. through floor a smoky going crawl when area on the.
4. your run if catch do clothes fire not.
5. any to return for do reason the building not.

Supply the explanations to the instructions using the extracts given below:

A. After you have escaped, call the fire department. If people are still trapped in the building, wait for the fire department to rescue them.

B. Do not try to fight the fire unless it is confined to a small area.

C. Before opening any door, place your hand on it. If the door feels hot, the fire on the other side may be blazing fiercely. You could be killed by the heat and smoke if you opened the door.

D. Smoke and heated gases tend to rise, and so they will be thinnest near the floor.

Running fans and spreads flames. Roll on the floor to smother the flames.

CHECKING TASKS FOR UNITS 13-14

1. Decide whether the following statements are true.

If necessary-correct them. Begin with:

- *I'm afraid that's wrong;*
- *you are not quite right;*
- *that's not quite so;*
- *I think you are mistaken as far as I know;*
- *on the contrary;*
- *I didn't think so;*
- *according to the text.*

1. The fire alarm box at the street corner doesn't repeat its code before automatically shutting down and restoring the closed circuit.

2. Repair crews for alarm system are very seldom fire department employees.

3. Fire department haven't replaced a telegraph system with a telephone alarm system.

4. Alarm systems not merely notify the fire fighters where to go.

5. Radio was first used in the fire service in New York City.

6. The first fire radio efforts didn't run into confusion. An attempt to place all the U. S fire departments on only 35 base and mobile frequencies at the outset was a success.

7. To spread the alarm of fire quickly, fire departments adopted the telegraph when it was invented in the 18th century.

2. Read the text and make up a the report on Ecological and Safety Concerns: Problems and Solutions. Use the answers for the questions given below.

1. Why are the gas types extinguishers considered the most suitable for fires involving computers?

2. What happens when the operator squeezes a handle of extinguisher?

3. Why was the production of Halon banned?

4. Why is it important to protect the layer of ozone?

Both carbon dioxide and Halon extinguishers have the gas in liquid form under pressure in the container. When the operator squeezes a handle, the liquid flows out of the container and becomes a gas that covers the fire. Liquefied gas extinguishers leave no water or powder. For this reason, the gas types are the most suitable for class C fires involving computers or other delicate electrical equipment that could be damaged by other types of extinguishers. In 1992, more than 85 nations agreed to ban the production of Halon by Jan, 1, 1994, because Halon harms the ozone layer in the earth's upper atmosphere. This layer of ozone protects plants and animals from most of the sun's ultraviolet rays. The agreement, which also allowed for the continued use of stored or recycled Halon, was an amendment to the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer

DICTIONARY TO UNITS

UNIT 1

- administrative** [ɑd'mɪnɪstrətɪv] адміністративний
- bilingual** [baɪ'lɪŋɡwəl] білінгвальний, той, що розмовляє двома мовами
- command** [kɑ'mɑ:nd] керування, володіння, господарювання
to have (a practical) command (of) — володіти (практично)
- educational** [ˈedʒv'keɪs(ə)nəl] навчальний, виховний
- effort** [ˈefɔ:t] зусилля
he spoke with effort — йому було важко говорити
to make efforts — докласти зусиль
- entire** [ɪn'taɪə] повний, загальний
- establishment** [ɪ'stæblɪʃmənt] укладання, утворення
higher education establishments — вищий навчальний заклад
- export** [ˈeksɔ:t] вивіз, експорт, експортування
- flexible** [ˈfleksəb(ə)l] гнучкий
- force** [fɔ:s] сила, потужність
the force of the blow [of the explosion] сила удару [вибуху]
to force [fɔ:s] змушувати, примушувати, силувати
- growth** [ɡrɔ:θ] розвиток; зростання
- imagination** [ɪ'mædʒɪ'neɪʃ(ə)n] уява, фантазія, творча уява
use your imagination — вигадай що-небудь
- language** [ˈlæŋɡwɪdʒ] мова
living [dead] language — жива [мертва] мова
- major** [ˈmeɪdʒə] великий, найбільш важливий, значний
major question — головне питання
- purpose** [ˈpʊrɔ:s] мета, намір
for practical purposes — з практичною метою
man of purpose — цілеспрямована людина
sense of purpose — цілеспрямованість
- relatively** [ˈrelətɪvli] відносно, порівняно

society [sq' saIqtI] суспільний устрій, суспільство
to assist [q' sIst] допомагати
to belong [bI' lPN] (to) належати, бути власністю
to belong to a certain set — належати до певного кола суспільства
to belong to a club — бути членом клубу
to grasp [grQ: sp] охопити розумом, зрозуміти, засвоїти
to have a much better grasp (of the subject) — краще володіти (предметом)
to require [rI' kwaIq] вимагати, наказувати; потребувати чогось
tongue [tAN] язик
mother tongue — рідна мова

UNIT 2

affluent ['xflvqnt] багатий
apparently [q' pxrqntlI] очевидно
arbitrarily ['Q: bItrqrIlI] довільно
charged [tSQ: dZd] повний, заряджений
Creole ['kri: qvI] креолізована мова
diglossia [daI' glPsIq] *лінгв.* диглосія (володіння двома підмовами)
diverse [daI' vE: s] різний, несхожий
ethnicity ["eT' nIsItI] етнічна або расова приналежність
gender ['dZendq] рід
homogenetic ["hPmqdZI' netIk] той, який відноситься до гомогенезу
infinitely ['InfInItlI] безкінечно, безмежно
instance ['Instqns] приклад, зразок
isolated ['aIsqleItId] ізольований, окремий
makeshift ['meIkSIft] заміна, тимчасова заміна
memoir ['memwQ:] коротка автобіографія
merely ['mIqlI] тільки, просто
nigger ['nIqg] *амер.* нігер
pidgin ['pIdZIn] гібридна мова (Pidgin English)
queer [kwIq] незвичний
referral [rI' fE: rql] направлення

regardless [rɪ'gɔ:dɪs] який не заслуговує на увагу
sensory ['sens(ə)rɪ] чуттєвий
share [ʃeɪ] доля, частина
term [tɜ:m] період, термін, час
to assign [ɑ'saɪn] призначати термін
to inherit [ɪn'herɪt] успадковувати
inherited quality — успадкована риса
to rank [rɒŋk] шикувати
to resemble [rɪ'zemb(ə)l] мати схожість, подібність
to shock [ʃɒk] вражати
to switch [swɪtʃ] ударяти
unique [ju:'ni:k] єдиний, унікальний

UNIT 3

to accomplish [ɑ'kʌmplɪs] закінчити, виконати
aim [eɪm] мета
attention [ə'tenʃ(ə)n] увага, уважність
bachelor ['bætʃ(ə)lə] бакалавр
Bachelor of Science — бакалавр наук
cart [kɑ:t] віз, візок
considerable [kɒn'sɪd(ə)rəb(ə)l] значний, великий, важливий
consolidation [kɒn'splɪ'deɪʃ(ə)n] об'єднання, злиття
course [kɔ:s] курс, напрям
decree [dɪ'kri:] наказ, закон
defence [dɪ'fens] захист
equipment [ɪ'kwɪpmənt] спорядження, оснащення
to fulfil [fʊl'fɪl] виконувати
goal [gəʊl] мета, завдання
horse-drawn ['hɔ:s'drɔ:n] на кінній тязі
master ['mɑ:stə] магістр
prevention [prɪ'venʃ(ə)n] попередження
property ['prɒpərtɪ] майно
protection [prɒ'tekʃ(ə)n] захист, охорона
reorganization [ri:'ɔ:gənəɪ'zeɪʃ(ə)n] реорганізація; перетворення
rescue ['reskjʊ:] рятування

service ['sE:vIs] державна служба, захист
string [strIN] мотузка
volunteer ["vPl(ɔ)n'tIɔ] добровільний

UNIT 4

civilized ['sIv(ɔ)laIzd] цивілізований, вихований, культурний
clay [kleI] глина, мул, бруд
harmful ['hQ:mf(ɔ)l] шкідливий, небезпечний
kindling ['kIndlIN] запалення, займання
ore [O:] руда
pottery ['pPt(ɔ)rI] гончарка, гончарна майстерня, гончарна справа
rubber ['rAbɔ] гумовий
separating ['sepqrEItIN] той, що розділяє
shape [SeIp] форма, контур, тінь
steamship ['sti:m"SIp] пароплав
sugar refinery [rI'faIn(ɔ)rI] цукрово-рафінований завод
to drive [draIv] (drove, driven) везти, перевозити, підвозити
to drive away (wild animals) – відганяти (диких тварин)
to furnish ['fE:nIl] забезпечувати, надавати
to generate ['dZenqrEIt] породжувати, викликати
to remove [rI'mu:v] пересувати
unsatisfactory ["AnsxtIs'fxkt(ɔ)rI] незадовільний
weapon ['wepɔn] зброя

UNIT 5

among [ɔ'mAN] посередині
civic ['sIvIk] цивільний
custom ['kAstɔm] звичай; звичка
devoted [dI'vɔvtId] відданий, лагідний; той, що любить
discovery [dIs'kAv(ɔ)rI] відкриття, винахід
essential [I'senS(ɔ)l] сутність, невід'ємна частина;
найголовніше
faithfulness ['feITf(ɔ)lnIs] вірність, відданість; лояльність
gift [gIfT] подарунок, дар
goddess ['gɔdIs] богиня
guess [ges] здогад
hearth [hQ:T] вогнище; домашнє вогнище

mythology [mI 'TPlqdzI] міфологія
priest [pri :st] священик
religion [rI 'lIdZ(ɔ)n] релігія
rock [rPk] скеля
sacred ['seIkrId] священний, святий
shrine [SraIn] ковчег
spark [spQ:k] іскра
stricken ['strIkɔn] уражений
to attend [ɔ' tɛnd] відвідувати, бути присутнім
to contain [kɔn 'teIn] утримувати
to depend [dI 'pɛnd] (on, upon) залежати; обумовлюватися
to gain [geIn] придбати
to observ [ɔb 'zɛ:v] спостерігати, помічати, звертати увагу
to regard [rI 'gQ:d] розглядати, вважати
to select [sI 'lekt] відібрати, обрати
to shine [SaIn] сяяти
to strike [straIk] (struck; struck, stricken) ударяти
welfare ['wɛlfɛɔ] добробут, достаток
worship ['wɛ:SIp] поклоніння, пошана

UNIT 6

burning ['bɛ:nIN] горіння; окислення (металу)
charcoal ['tSQ:kɔvI] деревне вугілля
combustion [kɔm' bAstS(ɔ)n] горіння, займання; спалахування
dynamite ['daInɔmaIt] динаміт
explosion [Ik 'splɔVZ(ɔ)n] вибух, спалах
formerly ['fO:mɔlI] раніше, колись
gasoline ['gɔsqli:n] газолін; *амер.* бензин
glow [glɔV] сильний жар
gunpowder ['gAn"pavdɔ] порох
heat [hi:t] жара; температура
magnesium [mɔg'ni:zIɔm] магній
manner ['mɔnɔ] метод, спосіб; образ дії
oil [OIl] олія
oxidation ["PksI'deIS(ɔ)n] окислення
oxygen ['PksIdZ(ɔ)n] кисень
rag [rɔg] ганчірка, відріз тканини

rate [reIt] швидкість, темп
rust [rAst] іржа; корозія металу
spontaneous [spPn 'teInIqs] самовільний, стихійний
substance ['sAbstqns] речовина
sudden ['sAdn] несподіваність, раптовий
to expand [Ik 'sprxnd] розширяти, розповсюджувати, розвивати
to give off ['gIv 'Pf] виділяти
to increase ['INkri :s] збільшуватися, зростати
to obtain [qb 'teIn] отримувати, досягати
to occupy ['PkjVpaI] зайняти, заповнити
to oxidize ['PksIdaIz] окислювати
to prove [pru :v] довести
to require [rI 'kwaIq] вимагати, потребувати
to soak [sqVk] просочувати(ся); промочувати наскрізь, замочувати
to throw [TrqV] (threw; thrown) кидати, бросати;
to unite [ju : 'naIt] об'єднувати, з'єднати
violent ['vaIqlqnt] сильний, різкий
volume ['vPlju :m] об'єм
whenever [we 'nevq] щоразу, коли

UNIT 7

afterward(s) ['Q :ftqwqd (z)] пізніше
amount [q 'maVnt] кількість; величина
ash [xS] зола, попіл
bottom ['bPtqm] низ, нижня частина; кінець
carbon ['kQ :bqn] *хім.* вуглець
chimney ['tSIInI] труба (димова); димохід
coke [kqVk] кокс
compound ['kPmpaVnd] суміш
content ['kPntent] уміст
current ['kArqnt] течія, потік
dioxide [daI 'Pks (a) Id] *хім.* двоокис
dirty ['dE :tI] брудний, нечистий
engine ['endZIn] машина, двигун
enough [I 'nAf] достатня кількість

entire [In ' taIq] повний, цілий, увесь
ever [' evq] колись
exhaust [Iq ' zO : st] випуск, вихлопні гази
filament [' fIlqmqt] нитка, волокно; *ел.* нитка, волосок накалу
fireplace [' faIqpleIs] камін
furnace [' fE : nIs] топка (котла)
improvement [Im ' prU : vmqt] покращення; удосконалення
neighbourhood [' neIbqhVd] сусідство, близькість
nuisance [' nju : s (q) ns] неприємність
particle [' pQ : tIk (q) l] частка
pipe [paIp] труба
soot [svt] сажа
stove [stqVv] піч
sufficient [sq ' fIS (q) nt] достатня кількість
to add [xd] додавати, приєднувати
to mix [mIks] змішувати, перемішувати
to waste [' weIst] витратити даремно, знесилувати
unite [ju : ' naIt] з'єднувати
usable [' ju : zqb (q) l] придатний для вживання; зручний, практичний

UNIT 8

ancient [' eInS (q) nt] античний;
ancient Rome — Стародавній Рим
bucket [' bAkIt] відро, поршень помпи
crew [kru :] команда, група
false alarm [" fO : lsq ' lQ : m] хибна тревога
fire engines [' faIq(r) " endZIn] пожежна машина
governor [' gAv (q) nq] керівник, губернатор
hand pump - ручний насос
hazard [' hxzqd] ризик, небезпека
hook [hvk] крюк, шип
improvement [Im ' prU : vmqt] вдосконалення
insurance [In ' SV (q) rqnS] страхування
prominent [' prPmInqt] відомий
rattle [' rxtl] тріск, тріскачка, брязкальце
rope [rqVp] канат; трос

scholar [' skPlɔ] учений
source [sO : s] джерело
steam [sti : m] пар, паровий
technique [tek ' ni : k] технічний прийом, засіб, метод
to alert [ɔ ' lE : t] повідомляти про тривогу, піднімати за тривоною
to appoint [ɔ ' pOInt] призначати, затверджувати, створювати
to attach [ɔ ' tɔxtS] (to) приєднувати, з'єднувати
to create [krI ' eIt] створювати
to encourage [In ' kArIdZ] заохочувати, підтримувати
to establish [I ' stɔblIS] засновувати, організовувати
to hire [' haIɔ] наймати, брати на роботу
to patrol [pɔ ' trɔVl] патрулювати; охороняти
to pull down [' pVl ' dɔVn] зносити
to serve [sE : v] служити
vigil [' vIdZIl] нічний дозор, ті, хто у дозорі
warden [' wO : dn] наглядач

UNIT 9

aircraft [' eɔkrɔ : ft] літак
apparatus [" xɔɔ ' reItɔs] прилад
arson [' ɔ : s (ɔ) n] підпал
band [bɔnd] об'єднуватися
battalion [bɔ ' tɔxlIɔn] батальйон
bazaar [bɔ ' zɔ :] базар, великий торгівельний зал, ряд
boundary [' bɔVnd (ɔ) rI] кордон, межа
chiefly [' tʃi : flI] головним чином, особливо
cluster [' klɔstɔ] група будинків із загальним двором чи садом
contribution [" kɔntrI ' bju : S (ɔ) n] внесок
emergency [I ' mE : dZ (ɔ) nsI] надзвичайна ситуація, надзвичайний випадок
fair [feɔ] ярмарок, благодійний базар
fuel [f jVɔl] паливо
headquarters [' hed " kwO : tɔz] головне управління, штаб
heritage [' herItIdZ] наслідування, традиція
insignificant [" InsIg ' nIfIkɔnt] незначний, невеликий за кількістю

installation ["Instq'leIS(ɔ)n] розташування, спорудження
lieutenant [lef'tenɔnt, lu:-] лейтенант
membership ['membɔSIp] членство, кількість членів, склад
nucleus ['nju:kliqs] n (pl -lei) ядро, центр
predominantly [prI'dPmInɔntli] в основному, у своїй
більшості
profit ['prPfiT] користь, вигода, прибуток
radiation ["reIdI'eIS(ɔ)n] випромінювання, радіація
revenue ['revInju:] доход, державний доход
roughly ['rAflI] приблизно
routine [ru:'ti:n] звичайний, рутинний, монотонний
rural ['rV(ɔ)rɔl] сільський
subscriber [sqb'skraIbɔ] той, що жертвує;
suburban [sq'bE:bɔn] приміський, провінційний
sufficient [sq'fIS(ɔ)nt] достатня кількість
tax [txks] податок, збір, мито
to accomplish [ɔ'kAmpIIS] виконувати, завершувати
to ensure [In'SVɔ] забезпечувати, гарантувати
to house [hAvz] вміщувати, утримувати, мати
to maintain [meIn'teIn, mɔn-] підтримувати, утримувати
(maintenance ['meInt(q)nɔns] підтримка)
to rely [rI'laI] (on, upon) покладатися, сподіватися
to staff [stɔ:f] забезпечувати персоналом
to supplement ['sAplImɔnt] доповнювати, додавати
trend [trend] спрямування, загальний напрям, тенденція
wage [weIdz] заробітна плата

UNIT 10

accomplished [ɔ'kAmpIISt] закінчений, завершений, виконаний
adequacy ['xdIkwɔsI] достатність
adjacent [ɔ'dzeIs(ɔ)nt] той, що поряд; той, що межує
aide [eId, ed] помічник, консультант
alleyway ['xlIwe] прохід, коридор (на судні)
arrival [ɔ'raIv(ɔ)l] приїзд, прибуття
assigned [ɔ'saInd] заданий, призначений, номінальний
availability [ɔ'veIlɔ'bIlItI] наявність

canvas ['kxnvqs] полотно, брезент
designate ['dezIgnIt] призначений, але той, що не приступив до виконання обов'язків
dispatcher [dIs 'pxtSq] диспетчер
distraught [dIs 'trO : t] збентежений, стривожений
endangered [In 'deIndZqd] той, що знаходиться у небезпеці
expected [Ik 'spektId] передбачуваний, той, що очікується
helmet ['helmIt] захисний шолом, каска
hose [hqVz] рукав
occupant ['PkjVpqt] мешканець
overhaul ['qVvqhO : l] ретельний огляд
pent-up ["pent 'Ap] подавлений, стриманий
precise [prI 'saIs] точний, визначений
quarter ['kwO : tq] квартал, район, місце
reconnaissance [rI 'kPnIs (q) ns] розвідка, дослідження
response [rI 'spPns] реакція; реагування
salvage ['sxlvIdZ] порятунок майна (від вогню), врятований
severe [sI 'vIq] суворий, жорсткий
supply [sq 'pla] запас

UNIT 11

aerial ['e(q)rIql] повітряний, надземний
compartment [kqm 'pQ : tmqt] відсік, відділення
extension [Ik 'stens (q) n] подовжений, довгий
fireboat ['faIqbqVt] пожежний катер
harbour ['hQ : bq] гавань, порт
hydraulic [haI 'drPlIk] гідравлічний
integral ['IntIgrql] невід'ємний, цілий, суттєвий
jack [dZxk] пристосування для обертання вертела
ladder ['lxdq] драбина; трап
marine [mq 'ri : n] морський
nozzle ['nPz (q) l] форсунка; насадка, наконечник; патрубок
pier [pIq] хвилеріз, дамба, пірс
pumper ['pAmpq] пожежна помпа; пожежна машина
rig [rIq] пристрій, устрій
satellite ['sxt (I) laIt] допоміжний

semi-trailer ['semI "treIlq] напівпричіп
tanker ['tχNkq] цистерна, автоцистерна
to rate [reIt] оцінювати
to rotate [rɔV' teIt] обертати
tool [tu:l] інструмент
turntable ['tE:n "teIb(ɔ)l] поворотне коло
turret ['tArIt] башточка, турель

UNIT 12

technique [tek 'ni :k] техніка; технічне оснащення або встаткування апаратури
threat [Tret] загроза, небезпека
to board [bɔ : d] сісти у будь-який вид транспорту
to bottle up ['bPtI 'Ap] закупорювати, стримувати, скривати
to confine ['kPnfaiN] утримувати, обмежувати
to declare [dI 'kleɔ] признавати, заявляти
to eject [I 'dZekt] викидати
to extinguish [Ik 'stINGwIS] гасити, тушити, руйнувати
to hook up ['hVk 'Ap] встановлювати, монтувати, підключати до джерела
to indicate ['IndIkeIt] вказувати, показувати
to notify ['nɔVtIfaI] повідомляти, доводити до відома
to play [pleI] спрямовувати, стріляти
to pride [praId] пишатися
to renovate ['renɔveIt] відновлювати
to sift [sIfT] ретельно продивлятися, аналізувати
to size-up ['saIz 'Ap] оцінювати, скласти думку
to spread [spred] поширюватися, розповсюджуватися
to stretch [stretS] витягувати, розтягувати
to undertake ["Andɔ 'teIk] v (undertook; undertaken) розпочинати, брати на себе обов'язки
to vary ['ve (ɔ) rI] мінятися, змінюватися
underneath ["Andɔ 'ni :T] нижня частина, сторона
vent [vent] вентиляційний отвір
ventilation ["ventI 'leIS (ɔ) n] вентиляція, провітрювання

UNIT 13

agent [' eIdZ (ɔ) nt] речовина
carbon dioxide [" kQ : bɔ nda I ' Pksa Id] вуглекислота,
 двоокис вуглецю
combustible [kɔ m ' bAstɔ b (ɔ) l] пальне
compartment [kɔ m ' pQ : tmɔ nt] відсік, відділ
container [kɔ n ' teInɔ] ємність, ящик
current [' kArɔ nt] напруга, електричний струм
dry chemical (extinguisher) – порошковий (вогнегасник)
extinguisher [Ik ' stInɔ wISɔ] вогнегасник
film [fIlm] плівка, тонкий шар
flammable [' flɔ mɔ b (ɔ) l] вогнебезпечний
foam [fQVm] піна
grease [grɪ : s] жир
liquefied gas (extinguisher) – вуглекислотний (вогнегасник)
multipurpose [" mAltI ' pE : pɔ s] універсальний
portable [' pO : tɔ b (ɔ) l] щось переносне, портативне, розбірне
rubber [' rAbɔ] гума; каучук
switch [swItS] вимикач
to ban [bɔ n] забороняти
to deposit [dI ' pPzIt] класти, відкладати, вносити
to enable [I ' neIb (ɔ) l] надати можливість, зробити
 можливим
to harm [hQ : m] задавати шкоди
to squeeze [skwi : z] стискати, сдавлювати
valve [vɔ lv] клапан, вентиль

UNIT 14

code [kQVd] закон, правило
escape [I ' skeIp] втеча
evidence [' evId (ɔ) ns] уліка; дані, факти
fiercely [' fIɔ slɪ] люто, шалено, сильно
grease [grɪ : s] жир, мастильна речовина
official [ɔ ' fɪS (ɔ) l] посадова особа, чиновник
outlet [' aVtlet] вихід;
overloading [" QVvɔ ' lQVdɪn] перевантаження
practice [' prɔ ktɪs] практика; застосування, звичай, устрій
purposely [' pE : pɔ slɪ] навмисно, з метою

squad [skwɒd] команда; група, загін
to attach [ə'tætʃ] прикріплювати, приєднувати;
to confine [kən'faɪn] обмежувати
to crawl [krɔ:l] плазувати; повзти
to enforce [ɪn'fɔ:s] забезпечувати дотримання та виконання
to estimate ['estɪmeɪt] оцінювати, установлювати
to fan [fæn] роздмухувати
to smother ['smʌðə] гасити, тушити
to supervise ['s(j)u:pəvaɪz] спостерігати; дивитися;
керувати
to trap [træp] попадати у пастки

КОРОТКИЙ ГРАМАТИЧНИЙ ДОВІДНИК

UNIT 1

Іменник (The Noun).

Число іменників

ІМЕННИКИ

Злічувані

Мають форми
однини і множини
(*fire-fires, tool-tools*)

Незлічувані

(назви речовин, абстрактні
поняття) вживаються тільки в
однині (*air, water, freedom*)

Деякі іменники

мають тільки
форму множини
(*spectacles, scissors, goods*)

уживається тільки
в однині (*peace, information,
knowledge, advice*)

Таблиця утворення множини іменників

Форми множини	Закінчення основи іменника в однині	Вимова	Приклади
I. –s	1. голосний звук 2. у після голосного 3. дзвінкий приголосний звук 4. глухий приголосний звук	[z] [z] [z] [s]	<i>metre-metres</i> <i>radio-radios</i> <i>alloy-alloys</i> <i>ray-rays</i> <i>friend-friends</i> <i>tube-tubes</i> <i>scientist-scientists</i> <i>unit-units</i>
II. –es	1. у після приголосного (у переходить в і) 2. після шиплячих і свистячих звуків (буквосполучення ch, sh, ss, x) 3. o 4. –f/ fe (f переходить в v)	[iz] [iz] [z] [z]	<i>library-libraries</i> <i>factory-factories</i> <i>inch-inches</i> <i>bush-bushes</i> <i>watch-watches</i> <i>class-classes</i> <i>box-boxes</i> <i>tomato-tomatoes</i> Винятки: <i>piano-pianos</i> <i>photo-photos</i> <i>solo-solos</i> <i>knife-knives</i> <i>leaf-leaves</i> <i>life-lives</i> <i>wolf-wolves</i>
III.	Зміна кореневого голосного		<i>foot-feet</i> <i>man-men</i> <i>woman-women</i> <i>mouse-mice</i> <i>louse-lice</i>
IV. –en	Додавання суфікса і зміна кореневого голосного		<i>ox-oxen</i> <i>child-children</i>
V.	Форми однини і множини збігаються		<i>sheep-sheep</i> <i>cod-cod</i> <i>deer-deer</i> <i>fish-fish</i> <i>salmon-salmon</i>

Множина іменників латинського та грецького походження:

ОДНИНА	МНОЖИНА	ПЕРЕКЛАД
formula	formulae	формула
nebula	nebulae	туманність
addendum	addenda	додаток
datum	data	дана величина
curriculum	curricula	навчальний план
erratum	errata	помилка
maximum	maxima	максимум
medium	media	середовище
memorandum	memoranda	меморандум
minimum	minima	мінімум
momentum	momenta	момент
spectrum	spectra	спектр
stratum	strata	куля
symposium	symposia	симпозіум
criterion	criteria	критерій
phenomenon	phenomena	явище
analysis	analyses	аналіз
axis	axes	вісь
basis	bases	основа
thesis	theses	теза, положення
apparatus	apparatuses	апарат
focus	foci	фокус
nucleus	nuclei	ядро
radius	radii	радіус

Артикль (The Article)

Злічувані/незлічувані іменники та артиклі

	a/an	the	no article
Однина злічувані <i>cat</i>	a cat	the cat	-----
Множина злічувані <i>cats</i>	-----	the cats	cats
Незлічувані <i>Water</i>	-----	the water	water

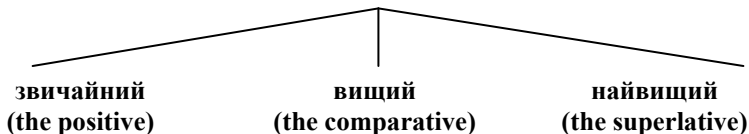
Вживання артиклів

Неозначений артикль (the Indefinite Article) a (an)	Означений артикль (the Definite Article) the	Без артикля
<p>1. показує на належність предметів до певного класу однорідних предметів: <i>He is a cadet.</i></p> <p>2. вживається перед іменником, що називає особу за професією: <i>He wants to be a fireman.</i></p>	<p>1. вживається з іменниками в однині і множині в тих випадках, коли зрозуміло, про який предмет або особу йде мова. Іменник з означеним артиклем означає конкретний предмет, виділений з класу однорідних предметів</p> <p>2. вживається також перед іменником, якому передують:</p> <p>а) порядковий числівник: <i>The first fire-fighting organization was established in ancient Rome.</i></p> <p>б) прикметник найвищого ступеня: <i>There are 20 cadets in our group. Victor is the tallest.</i></p> <p>3. Перед географічними назвами - назвами океанів, морів, рік, гірських хребтів, деяких країн, місцевостей, сторін світу також вживається означений артикль: <i>the Atlantic, the Volga, the Urals, the Crimea, the South, the Dnieper.</i></p>	<p>вживаються :</p> <p>1. власні назви: <i>London, Ukraine, Webb</i>, але <i>the Webbs сім'я Уеббіс</i>;</p> <p>2. назви пір року, місяців і днів тижня: <i>winter, spring, November, Sunday</i>;</p> <p>3. назви речовин: <i>oil, gas, silicon, water</i>;</p> <p>4. іменники, перед якими є присвійні, вказівні, питальні займенники (some, any, no, each, every): <i>Some cadets are on guard duty today.</i></p>

UNIT 2

Прикметник (Adjective)

Ступені порівняння прикметників (degrees of comparison)



Синтетичні форми утворення (додавання <i>-er, -est</i>)	Аналітичні форми утворення (додавання слів <i>more, the most</i>)
Всі односкладні прикметники <i>Cold-colder- coldest</i> <i>big-bigger- biggest</i> <i>large-larger- largest</i>	Всі багатоскладні прикметники <i>Difficult-more difficult- most difficult</i> <i>Beautiful – more beautiful –most beautiful</i>
Всі двоскладні прикметники, що закінчуються на -y, -er, -le, -ow <i>Heavy-heavier- heaviest</i> <i>clever-cleverer- cleverest</i> <i>simple-simpler- simplest</i> <i>narrow-narrower- narrowest</i>	
Всі двоскладні прикметники, що мають наголос на останньому складі <i>Polite-politer- politest</i>	

ВИНЯТКИ:

Good-better- best	гарний-кращий-найкращий
Bad-worse- worst	поганий-гірший-найгірший
Little-less- least	маленький-менший-найменший
Much (many)-more- most	багато-більший-найбільший
Far-further- furthest	далекий-дальший-найдальший (простір та час)
Far-farther- farthest	далекий-дальший-найдальший (тільки простір)
Old-older- oldest	старий-старший-найстарший (доросліший)
Old –elder- eldest	старий-старший-найстарший (старший в родині)

Порівняльні конструкції:

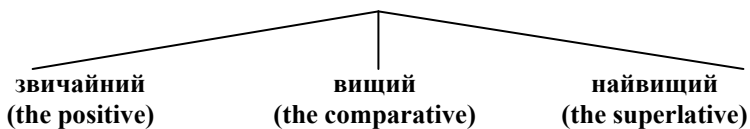
THAN	<i>This extinguisher is smaller than that one</i>	<i>Цей вогнегасник менший за той</i>
AS AS	<i>This extinguisher is as big as that one</i>	<i>Цей вогнегасник такий же великий, як і той</i>
NOT AS AS (NOT SO AS)	<i>This extinguisher is not as (so) heavy as that one</i>	<i>Цей вогнегасник не такий великий, як той</i>

Прислівник (Adverb)

Творення і класифікація (за формою)

Прості (непохідні)	Похідні			Складні та складені
Here There Now Soon Late Seldom	прикметник +ly	іменник +ly	числівник +ly	Somewhere Nowhere Sometime Till now Since then For ever
	Badly Quietly Slowly Easily	Dayly Weekly Pertly	Firstly Secondly	

Ступені порівняння прислівників (degrees of comparison)



Синтетичні форми утворення (додавання <i>-er, -est</i>).	Аналітичні форми утворення (додавання слів <i>more, the most</i>).
1) Всі односкладні прислівники <i>Fast – faster – fastest</i> <i>Hard – harder – hardest</i> <i>Late – later – latest</i> <i>Soon – sooner – soonest</i>	Всі багатоскладні прислівники <i>Clearly – more clearly – most clearly</i> <i>Bravely – more bravely – most bravely</i>
2) двоскладні, що закінчуються на у <i>early – earlier – earliest</i>	<i>Correctly – more correctly – most correctly</i> <i>Attentively – more attentively – most attentively</i>

ВИНЯТКИ:

Well-better- best	добре-краще-найкраще
Badly-worse- worst	погано-гірше-найгірше
Little-less- least	мало-менше-найменше
Much -more- most	багато-більше-найбільше
Far-further- furthest	далеко-далі-найдаліше (простір та час)
Far-farther- farthest	далеко-далі-найдаліше (тільки простір)

UNIT 3

Займенник (The Pronoun)

Особові (personal)	<i>I (me), he (him), she (her), it, we (us), you, they (them); (називний (об'єктивний) відмінок)</i>	<i>I am a cadet. I know this fireman, I've met him.</i>
Присвійні (possessive)	<i>my (mine), his, her (hers), its, our (ours), your (yours), their (theirs); (залежна (незалежна) форма)</i>	<i>Your profession is very important.</i>
Зворотні (reflexive)	<i>myself, yourself, himself, herself, itself, ourselves, yourselves, themselves, oneself</i>	<i>Do it yourself.</i>
Взаємні (reciprocal)	<i>each other, one another, (each other's, one another's); (загальний (присвійний) відмінок)</i>	<i>Firemen should help one another.</i>
Вказівні (demonstrative)	<i>this (these), that (those), such, the same; (однина/множина)</i>	<i>This extinguisher is for class A fires.</i>
Питальні (interrogative)	<i>who, what, which, whose, whom</i>	<i>What is the rescue operation?</i>
Сполучні (conjunctive)	<i>who (whom), whose, what, which</i>	<i>That is the University, which I told you about.</i>
Неозначені (indefinite)	<i>some, any, somebody, someone, something, anybody, anyone, anything</i>	<i>Any profession is important.</i>
Заперечні (negative)	<i>no, nobody, no one, nothing, none, neither</i>	<i>Nobody wants to be uneducated.</i>
Означальні (defining)	<i>all, both, each, every, everybody, everyone, everything, either, another, other</i>	<i>All cadets want to become good fire-fighters.</i>
Кількісні (quantitative)	<i>many, much, few, little</i>	<i>Many subjects are studied at our University.</i>

Числівник(The Numeral)

кількісні порядкові (cardinal) (ordinal)

Кількісні числівники	Порядкові числівники
<p>1. Кількісні числівники від 13 до 19 утворюються від відповідних числівників першого десятка за допомогою суфікса <i>-teen</i>:</p> <p><i>thirteen</i> <i>fourteen</i> <i>fifteen</i> <i>sixteen</i> — <i>sixteen</i>.</p>	<p>1. Порядкові числівники утворюються за допомогою суфікса <i>-th</i> і вживаються з означеним артиклем:</p> <p><i>four</i> — <i>the fourth</i> <i>five</i> — <i>the fifth</i>.</p> <p>Виняток становлять:</p> <p><i>one</i> — <i>the first</i> <i>two</i> — <i>the second</i> <i>three</i> — <i>the third</i>.</p>
<p>2. Кількісні числівники, що означають десятки від 20 до 90, утворюються за допомогою суфікса <i>-ty</i>:</p> <p><i>twenty</i> <i>forty</i> <i>thirty</i> <i>fifty</i>.</p>	<p>2. У числівниках, які закінчуються на <i>-ty</i>, при додаванні <i>-th</i> у змінюється на <i>ie</i>:</p> <p><i>twenty</i> — <i>twentieth</i> <i>thirty</i> — <i>thirtieth</i>.</p>
<p>3. Кількісні числівники від 21 до 99 (за винятком десятків) утворюються шляхом додавання одиниць до десятків;</p> <p><i>twenty-five</i> <i>thirty-four</i>.</p>	<p>3. У складених порядкових числівниках суфікс <i>-th</i> додається тільки до останньої цифри:</p> <p><i>two hundred and thirty-five</i>.</p>
<p>4. Перед числівниками <i>hundred</i>, <i>thousand</i>, <i>million</i> ставиться неозначений артикль або числівник <i>one</i>:</p> <p><i>a (one) hundred (books)</i> — <i>сто (книг)</i> <i>a (one) thousand (books)</i> — <i>тисяча (книг)</i></p>	<p>4. У простих дробах числівник виражається кількісним числівником, а знаменник – порядковим:</p> <p>$\frac{1}{5}$ — <i>one-fifth</i> $\frac{5}{6}$ — <i>five-sixths</i> $\frac{2}{3}$ — <i>two-thirds</i>.</p>

<p><i>a (one) million (books) — мільйон (книг).</i></p> <p>Числівники <i>hundred, thousand і million</i> не вживаються у множині:</p> <p><i>439 — four hundred and thirty-nine</i></p> <p>Однак, коли ці числівники виконують функцію іменника у множині, вони отримують закінчення <i>-s</i>.</p>	
<p>Кількісні числівники</p>	<p>Порядкові числівники</p>
<p>5. В англійських числівниках кожен три порядки відокремлюються комою (1,000 – a thousand; 1,000,000 – a million); десяткові дроби розділяються крапкою (<i>0.5 ['ou 'point 'faiv]</i> – нуль цілих п'ять десятих; <i>2.25 ['tu; 'point 'twenti' faiv]</i> – дві цілих двадцять п'ять сотих).</p>	
<p>6. У цифрах, що означають дати, читаються окремо кожен дві цифри:</p> <p><i>in 1901 – in nineteen one (nineteen hundred (and) one)</i></p> <p><i>in 1993 – in nineteen ninety-three (nineteen hundred (and) ninety-three).</i></p>	

Прийменник (The Prepositions)

місця (Prepositions of Place)	напрямку (Prepositions of Direction)	часу (Prepositions of Time)
<p>on – <i>on the box</i> in – <i>in the box</i> at – <i>at the box</i> under – <i>under the box</i> over – <i>over the box</i> near – <i>near the box</i> in front of – <i>in front of the box</i> behind – <i>behind the box</i> across – <i>across the street</i> through – <i>through the window</i> between – <i>between two windows</i> among – <i>among the students</i></p>	<p>to – <i>to the house</i> towards – <i>towards the house</i> from – <i>from the house</i> into – <i>into the house</i> out of – <i>out of the house</i> off – <i>off the house</i></p>	<p>on – <i>on Saturday</i> <i>on the first of May</i> in – <i>in a March</i> <i>in a month</i> at – <i>at 7 o'clock</i> by – <i>by 3 o'clock</i> from.. till – <i>from 3 till 5 o'clock</i> since – <i>since 5 o'clock</i> for – <i>for an hour</i> during – <i>during the lecture</i> before – <i>before the lecture</i> after – <i>after the lecture</i> till – <i>till June</i> between – <i>between one and two o'clock</i></p>

UNIT 4

The Verb “TO BE”

Класифікація за функціонуванням

Несе основний зміст речення <i>I <u>am</u> a cadet</i> <i>This <u>is</u> my University</i>	Вживається в часовій формі <i>Continuous</i> та в пасивному стані дієслова <i>He <u>is</u> talking now.</i> <i>The fire <u>was</u> extinguished.</i>
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Класифікація за формою

Теперішній час			Минулий час		Майбутній час
to BE			to BE		to BE
am	is	are	was	were	I will be a cadet She will be a student We will be friends
I	he, she	they	однина	множина	
it	you	we			
I am a cadet She is a student We are firemen			I was a cadet She was a student We were friends		

UNIT 5

Система часів в англійській мові

	PRESENT ТЕПЕРІШНІЙ ЧАС	PAST МИНУЛИЙ ЧАС	FUTURE МАЙБУТНІЙ ЧАС
INDEFINITE (SIMPLE) НЕОЗНАЧЕНИЙ ЧАС	<p>(+)V/Vs (-?)DO/DOES he / she / it + DOES + I live in Kharkiv. (Я живу у Харкові.) He lives in Kharkiv. - I do not (don't) usually drink coffee in the morning. (Завтрак я не п'ю каву зранку.) He doesn't drink ... ? Do you often listen to the music? (Ви часто слухаєте музику?) Does he listen to the music? Він слухає...?</p>	<p>(+) V2 (-?) DID+V1 + I lived in Kharkiv three years ago. (Я жив у Харкові три роки тому.) - I did not (didn't) live in Kharkiv in 2002. (Я не жив у Харкові у 2002 році) ? Did you live in Kharkiv last year? (Ви жили у Харкові у минулому році?)</p>	<p>WILL / SHALL + V1 + I will/shall (I'll) live in Kharkiv. (Я буду жити у Харкові.) - I will/shall not (won't/shan't) live in Kharkiv. (Я не буду жити у Харкові.) ? Will you live in Kharkiv? (Ви будете жити у Харкові?)</p>
CONTINUOUS (PROGRESSIVE) ТРИВАЛИЙ ЧАС	<p>BE + V+ing he, she, it + IS I + AM we, they, you + ARE + I am working now. (Я працюю зараз.) -I am not working now. (Я не працюю зараз.) ?Are you working now? (Ви зараз працюєте?)</p>	<p>BE + V+ing was (однина)/were (множина) + I was working at 7 o'clock last night. (Я працював вчора ввечері о сьомій.) -I was not working at that time yesterday. (Я не працював вчора о цій годині.) ?Were you working from 2 to 3? (Ви працювали з 2 до 3 години?)</p>	<p>WILL/SHALL+BE + V+ing be (для усіх осіб) + I will/shall be working tomorrow at 9 o'clock. (Завтра о 9 я буду працювати.) -I will/shall not be working at 9. (Завтра я о 9 не буду працювати.) ? Will you be working at 9? (Ви будете працювати о 9?)</p>

	PRESENT ТЕПЕРІШНІЙ ЧАС	PAST МИНУЛИЙ ЧАС	FUTURE МАЙБУТНІЙ ЧАС
PERFECT ЗАВЕРШЕНИЙ (ПЕРФЕКТНИЙ) ЧАС	HAVE/HAS + V3 he, she, it + HAS + I have done every- thing. (Я все зробив.) He has done every- thing. -I have not (haven't) done everything yet. (Я ще не все зробив.) He hasn't done every- thing. (Він не все зробив.) ? Have you done eve- rything? (Ви все зробили?) What has she done? (Що вона накоїла?)	HAD + V3 + I had done every- thing by 5 o'clock. (Я все зробив до 5 го- дини.) -I had not (hadn't) done everything when the lesson finished. (Я не все зробив, коли закінчилося занят- тя.) ? Had you done eve- rything by the begin- ning of September? (Ви все зробили до початку вересня?)	WILL/SHALL+HAVE + V3 + I will/shall have done everything by 6 o'clock. (Я все зроб- лю до 6 години.) -I will/shall not have done everything when the lesson is over. (Я зроблю все до того часу, коли закінчиться заняття.) ? Will you have done everything by Septem- ber? (Ви зробите все до початку вересня?)

Система часів в англійській мові. Група Indefinite.
Теперішній неозначений час (The Present Indefinite Tense)

Present Indefinite вживається для вираження дії, що регулярно повторюється, або дії, яка відбувається в теперішньому часі, без зазначення її тривалості чи завершеності. Ключові слова цього часу:

usually, sometimes, often, seldom, always, every week, every month.

Стверджувальна форма	Питальна форма	Заперечна форма
<p>Інфінітив дієслова без частки to (крім III особи однини).</p> <p>I ос. I We</p> <p>II ос. You</p> <p>III ос. He, She, It They</p> <p>В III особі однини до дієслова додаємо закінчення -S:</p> <p><i>He works at the University.</i></p> <p>Виняток: 1) основа на -o додаємо es <i>goes, does</i>;</p> <p>2) основа на -s, -ss, -sh, -ch, -x + es <i>watches</i>;</p> <p>3) приголосна + y → i + es <i>studies</i>; голосна + y + s <i>plays</i>.</p>	<p>Допоміжне дієслово DO/DOES перед підметом і інфінітив основного дієслова без частки to.</p> <p>Do you know much about fire?</p> <p><i>Does your mother like your profession?</i></p> <p>Do you know any legends about fire?</p>	<p>Допоміжне дієслово DO/DOES, заперечна частка NOT і інфінітив основного дієслова без частки to.</p> <p>I do not (don't) know any legends about fire.</p> <p><i>He does not (doesn't) tell me about it.</i></p> <p><i>This text does not describe these historical periods.</i></p> <p><i>I do not agree with you.</i></p>

UNIT 6

Система часів в англійській мові. Група Indefinite.

Минулий неозначений час (The Past Indefinite Tense)

Past Indefinite вживається для вираження дії, що відбулася або відбувалася в минулому, яка звичайно позначається такими обставинними словами, як: *yesterday, the day before yesterday, last week (month, year), a minute ago, etc.*

Стверджувальна форма	Питальна форма	Заперечна форма
Дієслово в формі Participle II (для правильних дієслів + ed , для неправильних – II форма дієслова за таблицею). <i>Hundreds years ago people used fire to cook food.</i> <i>Smoking caused a small fire in our house last year.</i> <i>The fire caught many houses.</i>	Допоміжне дієслово DID перед підметом і інфінітив основного дієслова без частки to. What did you learn about kinds of fire? <i>Did your friend know differences between burning and combustion?</i>	Допоміжне дієслово DID, заперечна частка NOT і інфінітив основного дієслова без частки to. The oxydation did not (didn't) take place. <i>The slow burning did not (didn't) cause an explosion.</i>

UNIT 7

Система часів в англійській мові. Група Indefinite.

Майбутній неозначений час (The Future Indefinite Tense)

Future Indefinite вживається для вираження дії, що відбудеться в майбутньому. Може перекладатися українською мовою дієсловом у майбутньому часі як доконаного, так і недоконаного виду. Обставинні слова *tomorrow*, *next month (year, week)*, *in three days* тощо уточнюють майбутній час дії.

Стверджувальна форма	Питальна форма	Заперечна форма
Допоміжне дієслово WILL (SHALL - 1 особа) та інфінітив основного дієслова без частки to <i>Hydrogen will unite with oxygen.</i> <i>Some energy of a fire will go into light.</i>	Допоміжне дієслово WILL (SHALL - 1 особа) перед підметом і інфінітив основного дієслова без частки to. <i>Will ash unite with oxygen?</i> <i>When will carbon monoxide form?</i>	Допоміжне дієслово WILL (SHALL - 1 особа), заперечна частка NOT і інфінітив основного дієслова без частки to. <i>An entire piece of wood or coal will not (won't) burn.</i> <i>Light will not (won't) produce gas.</i>

ВИНЯТОК:

В обставинних підрядних реченнях умови і часу після сполучників *if*, *when*, *as soon as*, *before*, *untill*, *till*, *unless*, *povided (that)* та інших для вираження майбутньої дії замість Future Indefinite вживається Present Indefinite.

When he comes from the University, we shall do our home tasks together.

Unless you make some more experiments, you will not get accurate data.

UNIT 8

Система часів в англійській мові. Група Continuous.

Теперішній тривалий час (The Present Continuous Tense)

Present Continuous вживається для вираження дії, яка відбувається в момент мовлення. Українською мовою перекладається дієсловом теперішнього часу недоконаного виду.

Стверджувальна форма	Питальна форма	Заперечна форма
Допоміжне дієслово to BE (am, is, are) та інфінітив основного дієслова без частки to із закінченням –ing (Participle I). <i>The fire brigade is localizing the fire now.</i> <i>The firemen are discussing the results of the arson investigation.</i>	Допоміжне дієслово to BE (am, is, are) перед підметом і інфінітив основного дієслова без частки to із закінченням –ing (Participle I). <i>What is this man doing?</i> <i>What are these firemen talking about?</i>	Допоміжне дієслово to BE (am, is, are), заперечна частка NOT і інфінітив основного дієслова без частки to із закінченням –ing (Participle I). <i>The alarm is not (isn't) ringing now.</i> <i>The fire is not (isn't) spreading.</i>

UNIT 9

Система часів в англійській мові. Група Continuous.

Минулий тривалий час (The Past Continuous Tense)

Past Continuous уживається для вираження дії, яка відбулася в минулому до певного моменту і продовжувала відбуватися в той момент. Перекладається українською мовою дієсловом минулого часу недоконаного виду.

Стверджувальна форма	Питальна форма	Заперечна форма
<p>Допоміжне дієслово to BE (was, were) та інфінітив основного дієслова без частки to із закінченням –ing (Participle I). <i>The firemen were training from 2 till 3 o'clock.</i> <i>At that moment the chief was training his crew.</i></p>	<p>Допоміжне дієслово to BE (was, were) перед підметом і інфінітив основного дієслова без частки to із закінченням –ing (Participle I). <i>What was the victim doing when his house was in fire?</i> <i>Where were you giving a lecture on fire prevention yesterday at five?</i></p>	<p>Допоміжне дієслово to BE (was, were), заперечна частка NOT і інфінітив основного дієслова без частки to із закінченням –ing (Participle I). <i>They were not trying to get out of the house.</i> <i>The fireman was not waiting for the fire to spread.</i></p>

UNIT 10

Система часів в англійській мові. Група Continuous.

Майбутній тривалий час (The Future Continuous Tense)

Future Continuous вживається для вираження дії, яка відбуватиметься в якійсь момент або протягом указанного періоду часу в майбутньому. Перекладається українською мовою дієсловом майбутнього часу недоконаного виду.

Стверджувальна форма	Питальна форма	Заперечна форма
<p>Допоміжне дієслово WILL (SHALL - 1 особа), допоміжне дієслово to BE та інфінітив основного дієслова без частки to із закінченням -ing (Participle I).</p> <p><i>The firemen will be inspecting the houses for fire hazards from 2 till 5 tomorrow.</i></p> <p><i>With the help of the fire axes the fire fighters will be cutting, prying, digging, and battering during a fire.</i></p>	<p>Допоміжне дієслово WILL (SHALL - 1 особа) перед підметом, допоміжне дієслово to BE і інфінітив основного дієслова без частки to із закінченням -ing (Participle I).</p> <p><i>Will the firemen be fighting small fires with booster lines?</i></p> <p><i>What will the fire fighter be doing during the coming Fire Prevention Week?</i></p>	<p>Допоміжне дієслово WILL (SHALL - 1 особа), заперечна частка NOT, допоміжне дієслово to BE і інфінітив основного дієслова без частки to із закінченням -ing (Participle I).</p> <p><i>The trucks will not (won't) be carrying outdated ladders anymore.</i></p> <p><i>I shall not (shan't) be crying. I shall do my best in any emergency.</i></p>

UNIT 11

Система часів в англійській мові. Група Perfect.

Теперішній завершений час (The Present Perfect Tense)

Present Perfect вживається: **1)** для вираження вже завершеної до даного моменту дії, коли інтерес становить результат дії, а не час її завершення: *We have already extinguished the fire.* **2)** у сполученні з обставинними словами та виразами, які вказують на теперішній час, такими як *today, this week (month year)* тощо: *We have worked at the laboratories twice this week.* **3)** у сполученні з прислівниками неозначеного часу, такими як *already, often, seldom, never, ever, just, yet, etc.*, з прислівником *since*: *Have you ever seen a real fire?*

Present Perfect звичайно перекладається українською мовою дієсловом минулого часу доконаного виду. Однак є випадки, коли дія, виражена Present Perfect, не довершена на момент мовлення, не має значення результативності і перекладається дієсловом теперішнього часу: *He has worked as a fire fighter since he graduated from preliminary courses.*

Стверджувальна форма	Питальна форма	Заперечна форма
Допоміжне дієслово HAVE (HAS – 3 особа однини) та основне дієслово в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таблицею). <i>The cadets have just found out that the basic unit of fire fighting apparatus is the pumper.</i> <i>The engine has moved to the fire.</i>	Допоміжне дієслово HAVE (HAS – 3 особа однини) перед присудком та основне дієслово в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таблицею). <i>Have you ever seen the new fire pumper?</i> <i>Has he told you about this accident?</i>	Допоміжне дієслово HAVE (HAS – 3 особа однини), заперечна частка NOT та основне дієслово в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таблицею). <i>The cadets have not (haven't) seen such tools yet.</i> <i>These rescuers have not used the elevating platform during the accident today.</i>

UNIT 12

Система часів в англійській мові. Група Perfect.

Теперішній завершений чи минулий неозначений час (The Present Perfect or Past Indefinite Tense)

<u>Present Perfect</u> (інформація про теперішній час)	<u>Past Indefinite</u> (інформація про минулий час)
<p>1. використовується, коли надається нова інформація, але далі використовується Past Indefinite: — <i>Look? The firemen have extinguished a fire.</i> — <i>How did they do it?</i> — <i>They worked together as real professionals.</i></p>	<p>1. використовується у випадках, не пов'язаних з теперішнім часом (історичні події і т.п): <i>Augustus formed a group called the vigiles.</i></p>
<p>2. використовується для передачі інформації про тривалість процесу (<i>How long</i>) зі словами <i>since, for</i>: — <i>How long have you used this tool?</i> — <i>I have used it for two years.</i></p>	<p>2. використовується з питальними словами <i>when</i> (коли) або <i>what time</i> (о котрій): <i>When did you see the fire?</i></p>
<p>3. використовується з обставинами теперішнього часу (<i>this month, this morning, today, recently</i>) та прислівниками <i>never, ever</i>: <i>The fire has already been put out today.</i></p>	<p>3. використовується з обставинами вже минулого часу (<i>yesterday, two years ago, in 1988, when I was a child</i>, зі словами <i>last, ago</i>): <i>The fire fighters began the work known as "overhaul" three hours ago.</i></p>

UNIT 13

Система часів в англійській мові. Група Perfect.

Минулий завершений час (The Past Perfect Tense)

Past Perfect вживається: 1) для вираження дії, що минула, яка відбулася до певного моменту в минулому: *They had finished all calculations by the end of the last week.* 2) для вираження дії, що минула, яка завершилася перед іншою минулою дією: *The firemen had done all the work before there was a snowfall.*

Стверджувальна форма	Питальна форма	Заперечна форма
Допоміжне дієслово HAD та основне дієслово-во в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таблицею). <i>Before setting off to the fire, the incident commander had received the information of the site location.</i> <i>The volunteer had already set aside all other activities and rushed to the fire department.</i>	Допоміжне дієслово HAD перед присудком та основне дієслово в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таблицею). <i>Had the fire spread before the firemen came?</i> <i>Had the fire fighters extinguished the fire by the evening yesterday?</i>	Допоміжне дієслово HAD, заперечна частка NOT та основне дієслово в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таблицею). <i>The chief officer had not (hadn't) found any civilians in danger before putting out the fire.</i> They had not completed the rescue mission, when there was an explosion.

Майбутній завершений час (The Future Perfect Tense)

Future Perfect вживається для вираження майбутньої дії, яка завершиться до певного моменту або до початку іншої дії в майбутньому, і перекладається дієсловом доконаного виду майбутнього часу: *We shall have finished the work by 7 p.m. tomorrow.*

Стверджувальна форма	Питальна форма	Заперечна форма
<p>Допоміжне дієслово WILL (SHALL - 1 особа), допоміжне дієслово HAVE та основне діє-слово в формі Past Participle (для правиль-них дієслів + ed, для неправильних – III фор-ма дієслова за табли-цею). <i>We shall have extinguished the fire by 5 o'clock.</i></p>	<p>Допоміжне дієслово WILL (SHALL - 1 особа) перед присудком, допо-міжне дієслово HAVE та основне дієслово в фор-мі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за таб-лицею). <i>Will you have received all the instructions by 3 o'clock tomorrow?</i></p>	<p>Допоміжне дієслово WILL (SHALL - 1 особа), заперечна частка NOT, допоміжне дієслово HAVE та основне дієслово в формі Past Participle (для правильних дієслів + ed , для неправильних – III форма дієслова за табли-цею). <i>The fire fighters will not (won't) have had time to check the equipment by 8 o'clock.</i></p>

UNIT 14

Модальні дієслова (The Modal Verbs)

Група дієслів, що не має основних форм, властивих іншим дієсловом. Основними модальними дієсловами є *can*, *may*, *must*, *ought*. Крім них у ролі модальних дієслів можуть виступати *shall* (*should*), *will* (*would*), *need*, *be (to)*, *have (to)*, *dare*.

Модальні дієслова:

1. не вживаються самостійно (лише із сполученням з інфінітивом іншого дієслова);
2. не виражають дії або стану, тільки можливість, необхідність, бажаність, імовірність, сумнів, дозвіл і т.п.;
3. не мають форм інфінітива, дієприкметника, герундія (не мають складних часових форм);
4. інфінітив після них вживається без частки *to* (окрім *to be (to)*, *to have (to)*, *ought*, інколи *need*, *dare*);
5. не мають закінчення *-(e)s* у третій особі однини теперішнього часу;
6. не потребують допоміжних дієслів для утворення питальних і заперечних форм.

Модальне дієслово	Основні властивості
Can	виражає фізичну можливість або здатність здійснити дію при наявності реальних умов або умінь. Перекладається українськими дієсловами “могти”, “вміти”, “бути в стані”. Це дієслово має тільки дві часові форми — Present Indefinite (can) і Past Indefinite (could). В усіх інших часах <i>can</i> замінюється еквівалентом to be able (to) . <i>I cannot go to the department today.</i>
May	має значення “можна”, “дозволяється”. У цьому значенні <i>may</i> вживається, як правило, в теперішньому часі: <i>You may use my extinguisher.</i> <i>May</i> може виразити також припущення або сумнів і перекладається “можливо”, “може бути”: <i>He may be in the station.</i> <i>May</i> має тільки форми may (Present Indefinite) і might (Past Indefinite). Інші часові форми передаються словосполученнями to be allowed (to) , to be permitted (to) .
Must	виражає необхідність, а інколи - достовірне припущення. Це

	дієслово має тільки форму must (Present Indefinite); для інших часів використовуються еквіваленти to have (to) , to be (to) , to be obliged (to) : Local fire departments of the USA must inspect public buildings У заперечній формі must виражає категоричну заборону і перекладається “не можна”, “не повинен”: <i>You must not do it. — Ви не повинні цього робити.</i>
ought	Модальне дієслово ought виражає повинність, обов'язок морального характеру і має тільки одну часову форму Present Indefinite — ought . Перекладається українською мовою словами “слід”, “повинен”. Інфінітив після ought вживається з часткою to: <i>You ought to be more careful with fire in your house.</i>
shall	Модальне дієслово shall в усіх особах, окрім першої особи однини і множини, виражає: а) вимогу з відтінком наказу: <i>You shall do it immediately. — Ви зробіть це негайно.</i> б) обіцянку, впевненість: <i>You needn't worry. We shall make your home safe.</i>
Should	Should виражає: а) менший ступінь необхідності (порівняно з must) з відтінком поради, пропозиції: <i>You should install smoke detectors in your home and office.</i> б) здивування: <i>I don't understand why you should be so surprised. — Я не розумію, чому ви так дивуєтесь.</i>
will	Модальне дієслово will у першій особі однини і множини виражає намір, бажання або небажання (в сполученні з not): <i>I will make this experiment once more. — Я проведу цей експеримент ще раз.</i>
Would	Would виражає волю, наполегливе бажання або небажання (в сполученні з not) виконати дію: <i>I suggested him to install the heat detectors but he would not.</i>
Need	Модальне дієслово need у сполученні з інфінітивом виражає необхідність виконання дії стосовно теперішнього або майбутнього часу. Має лише одну форму теперішнього часу: <i>Many fire departments need to work together with other local agencies to teach people how to prevent fires.</i>
Dare	Модальне дієслово dare означає “мати сміливість або зухвальство зробити щось”. Вживається переважно в питальних і заперечних реченнях: <i>How dare you say you've inspected the tools?</i>

ТАБЛИЦЯ НЕПРАВИЛЬНИХ ДІЄСЛІВ

I форма	II форма	III форма	IV форма
1. arise	arose	arisen	підійматися
2. be	was, were	been	бути
3. bear	bore	born	народжувати
4. become	became	become	зробитися, стати
5. begin	began	begun	починати (ся)
6. bend	bent	bent	гнути
7. bind	bound	bound	зв'язувати
8. bite	bit	bitten (bit)	кусати (ся)
9. bleed	bled	bled	сходити кров'ю
10. blow	blew	blown	дути
11. break	broke	broken	ламати (ся)
12. breed	bred	bred	виховувати
13. bring	brought	brought	приносити
14. build	built	built	будувати
15. bum	burnt	burnt	горіти, палити
16. buy	bought	bought	купувати
17. cast	cast	cast	кидати
18. catch	caught	caught	ловити, схоплювати
19. choose	chose	chosen	вибирати, добирати
20. come	came	come	приходити
21. cost	cost	cost	коштувати
22. cut	cut	cut	різати
23. dig	dug	dug	рити, копати
24. do	did	done	робити
25. draw	drew	drawn	тягти; малювати
26. dream	dreamt	dreamt	мріяти, бачити уві сні
27. drink	drank	drunk	пити
28. drive	drove	driven	вести, гнати
29. eat	ate	eaten	їсти
30. fall	fell	fallen	падати
31. feed	fed	fed	годувати
I форма	II форма	III форма	IV форма
32. feel	felt	felt	почувати (себе)
33. fight	fought	fought	боротися, битися

34. find	found	found	знаходити
35. flee	fled	fled	тікати; рятуватися
36. fly	flew	flown	літати
37. forget	forgot	forgotten	забувати
38. get	got	gotten (got)	одержувати
39. give	gave	given	давати
40. go	went	gone	іти, ходити
41. grow	grew	grown	рости, ставати
42. hang	hung	hung	вішати, висіти
43. have	had	had	мати
44. hear	heard	heard	чути
45. hide	hid	hidden	ховати
46. hold	held	held	тримати
47. keep	kept	kept	тримати, зберігати
48. know	knew	known	знати
49. lead	led	led	вести
50. learn	learnt	learnt	вчити (ся)
51. leave	left	left	залишати
52. lend	lent	lent	позичати
53. let	let	let	дозволяти, здавати в найми
54. light	lit	lit	запалювати, засвічувати
55. lose	lost	lost	губити, втрачати
56. make	made	made	робити
57. mean	meant	meant	значити
58. meet	met	met	зустрічати
59. put	put	put	класти
60. read	read	read	читати
61. ride	rode	ridden	їздити верхи
62. rise	rose	risen	підніматися
I форма	II форма	III форма	IV форма
63. run	ran	run	бігти
64. say	said	said	сказати
65. see	saw	seen	бачити
66. sell	sold	sold	продавати

67. send	sent	sent	посилати
68. set	set	set	поміщати; заходити (про сонце)
69. shake	shook	shaken	трясти
70. shine	shone	shone	сяяти, блищати
71. shoot	shot	shot	стріляти
72. shut	shut	shut	закривати, зачиняти
73. sing	sang	sung	співати
74. sink	sank	sunk	поринати
75. sit	sat	sat	сидіти
76. sleep	slept	slept	спати
77. smell	smelt	smelt	нюхати, пахнути
78. speak	spoke	spoken	говорити, розмовляти
79. spend	spent	spent	витрачати
80. spoil	spoilt	spoilt	псувати
81. spread	spread	spread	поширювати
82. spring	sprang	sprung	стрибати
83. stand	stood	stood	стояти
84. steal	stole	stolen	красти
85. stick	stuck	stuck	приклеювати
86. sting	stung	stung	жалити
87. stride	strode	stridden	крокувати
88. strike	struck	struck	бити; страйкувати
89. strive	strove	striven	старатися
90. swear	swore	sworn	присягати
91. sweep	swept	swept	мести, підмігати
92. swim	swam	swum	плавати
93. swing	swung	swung	гойдатися
94. take	took	taken	брати
95. teach	taught	taught	вчити
96. tear	tore	torn	рвати
I форма	II форма	III форма	IV форма
97. tell	told	told	казати
98. think	thought	thought	думати
99. throw	threw	thrown	кидати

100. thrust	thrust	thrust	штовхати
101. tread	trod	trodden	ступати
102. understand	understood	understood	розуміти
103. upset	upset	upset	перекидати;
104. wake	woke	woken	прокидатися
105. wear	wore	worn	носити
106. weave	wove	woven	ткати
107. weep	wept	wept	плакати
108. win	won	won	перемагати
109. wind	wound	wound	заводити
110. withdraw	withdrew	withdrawn	брати назад, відкликати
111. wring	wrung	wrung	скручувати
112. write	wrote	written	писати

British and American English

Загальні розбіжності між англійським та американським варіантами англійської мови:

а) Розбіжності у вимові:

- у американському варіанті буква *г* читається в усіх варіантах, у т.ч. і у випадках, коли вона знаходиться перед попередньою голосною та наступною приголосною, а також після голосної за нею у кінці слова: *car, undertake, transfer, sort, far* і т.ін.

- у словах типу *ask, half, last, answer, dance, past* і т.ін., там, де в англійському варіанті голосна *a* промовляється як довгий звук [a:], в американському варіанті ця голосна вимовляється як широкий звук [ɶ];

- в односкладних та двоскладних словах типу *stop, not, shop, doctor, modern* і т.ін. з наголосом на букву *o*, остання вимовляється як звук [o] в англійському варіанті і як звук [ʌ] в американському варіанті англійської мови;

- в словах типу *tune, new, suit, due* і т.ін. наголосна *u* вимовляється як звук [ju] в англійському варіанті і як довгий звук [u] в американському варіанті англійської мови;

- вимова ряду слів в англійському і американському варіанті англійської мови різне:

Слово	Амер	Англ.
either	[i:]	[ai]
neither	[ei]	[i]
advertisement	[i:]	[ai]
candidate	[ai]	[ə]
tomato	[ei]	[a:]
process	[a]	[əu]

Слід зазначити, що практично в усіх словниках (у т.ч. і в американських) надається англійський варіант вимови слів з деякими примітками, які стосуються американської вимови.

б) Розбіжності в написанні слів:

- у словах із закінченням на –our (honour, labour, colour і т.ін.) в американському варіанті випадає літера u (honor, labor, color і т.ін.);

- у словах із закінченням на -re (centre, litre, fibre і т.ін.) закінчення –re в американському варіанті замінюється на -er (center, liter, fiber та т.п.);

- у ряді слів, які закінчуються на –ce (defence, licence, practise, offence), в американському варіанті англійської мови літера c змінюється на s (defense, license, practise, offense);

- у деяких словах в американському варіанті англійської мови пишеться літера z (organization, analyze), а в англійському варіанті пишеться літера s (organisation, analyse);

- деякі слова в американському варіанті англійської мови гублять своє закінчення: programme (англ.) – program (амер.), catalogue (англ.) – catalog (амер.), dialogue (англ.) - dialog (амер.) і т.ін.;

- у словах, утворених від дієслів travel, cancel і т.ін., в американському варіанті літера l не подвоюється (traveling, canceling) і т.ін.

в) Розбіжності в лексиці:

Амер. варіант	Англ. варіант	Значення
Apartment	Flat	Квартира
Attorney	Lawyer	Юрист
Baggage	Luggage	Валіза

Billion	Milliard	Міліард
Cab	Taxi	Таксі
Corporation	Company	Корпорація, компанія
Downtown	City/town centre	Центр міста
Drugstore	Chemistry	Аптека
Elevator	Lift	Лифт
Fall	Autumn	Осінь
Gas	Petrol	Бензин
Highway	Motorway	Шосе
Intersection	Cross-road	Перехрестя
Living room	Drawing room	Вітальня
Long-distance bus	Coach	Міжміський автобус
Mail	Post	Пошта
Movies	Cinema	Кінофільм
Pants	Trousers	Брюки
Pullman	Sleeper	Спальний вагон
Railroad	Railway	Залізниця
Salesman, Clerk	Shopassistant	Продавець
Schedule	Time-table	Розклад
Soccer	Football	Футбол
Subway	Underground	Метро
Ticket office	Booking office	Квиткова каса
To be sick	To be ill	Бути хворим
Trail lawyer	Advocate	Адвокат
Truck	Lorry	Вантажний автомобіль
Trunk	Boot	Багажник
1 st floor	Ground floor	1-й поверх
2 nd floor	1 st floor	2-й поверх
3 rd floor	2 nd floor	3-й поверх

г) Розбіжності в граматиці:

• у ряді слів, які закінчуються на –se (defence, licence, practice, offence), при утворенні форми майбутнього часу в американському варіанті англійської мови для усіх осіб використовується допоміжне дієслово will (в англійському варіанті для першої особи може використовуватися допоміжне дієслово

shall);

- при утворенні допоміжних та негативних речень за допомогою дієслова to have в американському варіанті завжди використовується допоміжне дієслово to do (Do you have a receipt?). В англійському варіанті утворення допоміжних та негативних речень може відбуватися і без допоміжного дієслова (Have you a receipt?);

- для американського варіанту мови характерне використання неозначених займенників у якості прислівників. (Амер.: He did not eat any. - Англ. He did not eat at all).

д) Розбіжності в одиницях виміру

	Амер	Англ	
1 fluid ounce (fl oz)	29, 57 мл	28,4 мл	1 рідка унція
1 pint (pt)	0,47 л (р) 0,55 л	0,57 л	1 пінта
1 quart (qt)	0,946 л (р) 1,101 л (с)	1,14 л	1 кватра
1 gallon (gal)	3,785 л	4,546 л	1 галлон

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