МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ОДЕСЬКИЙ ДЕРЖАВНИЙ ЕКОЛОГІЧНИЙ УНІВЕРСИТЕТ

МЕТОДИЧНІ ВКАЗІВКИ
для практичної роботи з дисципліни «Іноземна мова за професійним спрямуванням» для магістрів I курсу денної форми навчання за спеціальністю 101 «Екологія»

Одеса – 2016

ПЕРЕДМОВА

Розширення зв'язків України з зарубіжними партнерами робить нагальну потребу не просто у висококваліфікованих спеціалістах з екології, а в спеціалістах які б поєднували в собі екологічні знання зі знаннями іноземної мови. Володіння іноземною мовою стало не лише ознакою гарної освіти, але й невід'ємною характеристикою сучасного фахівця.

Майбутнім фахівцям потрібні навички практичного оволодіння іноземною мовою в різних видах мовленнєвої діяльності в обсязі тематики, обумовленої професійними потребами; одержування новітньої фахової інформації через іноземні джерела; користування усним монологічним та діалогічним мовленням у межах побутової суспільно-політичної загально екологічної та фахової тематики. Таким чином, метою навчання іноземної мови є формування необхідної комунікативної спроможності в сферах професійного та ситуативного спілкування в усній і письмовій формах.

Методичні вказівки включають професійно-орієнтовані навчальні матеріали за темами екології.

Курс розраховано на 135 годин (60 - I семестр; 75 – II семестр) практичних занять і вивчається з метою удосконалення професійних знань і розвитку умінь використання цих знань у англомовній професійній діяльності. Методичні вказівки також спрямовані на розвиток умінь усної та писемної комунікації.

Після вивчення даного курсу студенти повинні знати і вміти:

- читати та перекладати науково-технічну англомовну літературу за фахом для одержання необхідної інформації;
- розуміти зміст прочитаного та лексико-граматичний матеріал, наданий у методичних вказівках;
- розуміти і володіти відповідними граматичними конструкціями та матеріалом;
- брати участь в усному спілкуванні англійською мовою в обсязі матеріалу, передбаченого програмою.

ОРГАНІЗАЦІЯ САМОСТІЙНОЇ РОБОТИ СТУДЕНТІВ (І СЕМЕСТР)

Змістовні модулі	Денна форма				Заочна форма			
	Завдання на СРС	Кількість годин СРС	Форми поточного контролю СРС	Строк проведення (семестр, тиждень)	Завдання на СРС	Кількість годин СРС	Форми поточного контролю СРС	Час проведення (міжсесійний період, сесія)
1	2	3	4	5	6	7	8	9
ЗМ-П1	ПУО ПДЗ ПКР№1	5.75 5	УО ДЗ КР№1	1-4	ПУО	6,75	УО	сесія
ЗМ-П2	ПУО ПДЗ ПКР№2	5.75 5	УО ДЗ КР№2	5-8	ПУО	6,75	УО	сесія
ЗМ-П3	ПУО ПДЗ ПКР№3	5.75 5	УО ДЗ КР№3	9-12	ПУО	6,75	УО	сесія
ЗМ-П4	ПУО ПДЗ ПКР№4	5.75 5	УО ДЗ КР№4	13-15	ПУО ПАКР	11,75 20	УО АКР	сесія
ЗМ-І3	ПП	12	ППП	4,8,12	ПМКР	28	МКР	межсесійно
	ПЗКР	5		15	ПЗКР	5	ЗКР	сесія
	Разом:	60				85		

ОРГАНІЗАЦІЯ САМОСТІЙНОЇ РОБОТИ СТУДЕНТІВ (2 СЕМЕСТР)

Змістовні модулі	Денна форма				Заочна форма			
	Завдання на СРС	Кількість годин СРС	Форми поточного контролю СРС	Строк проведення (семестр, тиждень)	Завдання на СРС	Кількість годин СРС	Форми поточного контролю СРС	Час проведення (міжсесійний період, сесія)
1	2	3	4	5	6	7	8	9
ЗМ-П5	ПУО ПДЗ ПКР№1	5.175	УО ДЗ КР№1	1-3	ПУО	11,75	УО	сесія
ЗМ-П6	ПУО ПДЗ ПКР№2	9.175	УО ДЗ КР№2	3-5	ПУО	11,75	УО	сесія
ЗМ-П7	ПУО ПДЗ ПКР№3	5.175	УО ДЗ КР№3	6-8	ПУО	11,75	УО	сесія
ЗМ-П8	ПУО ПДЗ ПКР№4	9.175	УО ДЗ КР№4	8-10	ПУО ПАКР	11,7520	УО	сесія
ЗМ-П9	ПУО ПДЗ ПКР№5	9.175	УО ДЗ КР№5	10-12			УО	сесія
ЗМ-П10	ПУО ПДЗ ПКР№6	9.175	УО ДЗ КР№6	13-15			УО АКР	сесія
ЗМ-І3	ПП	20	ППП	4,8,12,15	ПМКР	28	МКР	межсесіонна
Іспит		20	ПІ	І				
Разом:		105				95		

Організація поточного, семестрового та підсумкового контролю знань студентів.

В дисципліні „Іноземна мова за професійним спілкуванням”, що читається для студентів І курсу денної та заочної форм навчання використовується 10 змістовних модулів (4 – 1 семестр, 6 – 2 семестр) – з практичної частини та з ІЗ.

В якості форми поточного контролю практичних модулів – усне опитування, контрольна робота, письмові переклади.

В якості індівідуального завдання – письмовий переклад текстів за фахом та соціально-політичної лексики.

В якості форми підсумкового контролю у 1 семестрі залік, у 2 семестрі - іспит.

І Семестр

Контроль поточних знань виконується на базі накопичувальної системи організації навчання.

Фактична сума балів, яку отримує студент за певний змістовний модуль, має складатися із результатів виконання заходів з контролю, що заплановані за цим змістовним модулем, та ураховувати своєчасність (наприклад: студент, який пропустив контрольний захід без поважних причин або отримав незадовільну оцінку, має право у тижневий термін виконати завдання цього заходу з максимальною сумою балів, еквівалентною оцінці не більшій ніж "задовільно") виконання студентом графіку навчального процесу.

Суми балів, які отримав студент за всіма змістовними модулями навчальної дисципліни, формують кількісну оцінку (бал успішності) за підсумками поточних контролюючих заходів студента з навчальної дисципліни. Результати поточного контролю заносяться до інтегральної відомості. Рішення про допуск студента до підсумкового семестрового контролю з конкретної навчальної дисциплін регламентується Положенням про проведення підсумкового контролю знань студентів.

Студент вважається допущеним до підсумкового семестрового контролю, якщо він виконав всі види робіт, передбачені робочою навчальною програмою дисципліни і набрав за накопичувальною системою суму балів не менше 50% від максимально можливої за практичну частину (для іспиту); та ≥ 50% від теоретичної та практичної частин для заліку.

Підсумковим контролем знань студентів у 1 семестрі є **залік.**

Студент отримує залік, коли він має на останній день семестру інтегральну суму балів поточного контролю, достатню (60% та більше) для

отримання позитивної оцінки **та не менше 50% від максимально можливої суми балів на заліковій контрольній роботі**.

Інтегральна оцінка (В) по дисципліні розраховується за формулою

$$В = 0,75 \times ОЗ + 0,25 \times ОЗКР,$$

де ОЗ – кількісна оцінка (у відсотках від максимально можливої) за змістовними модулями;

ОЗКР – кількісна оцінка (у відсотках від максимально можливої) залікової контрольної роботи.

Шкала переходу від оцінки поточного контролю до підсумкової оцінки

Сума балів	**Оцінка з заліку**
< 60	не зараховано
61 – 73,9	зараховано (задовільно)
74 – 89,9	зараховано (добре)
> 90	зараховано (відмінно)

Шкала оцінювання за системою ЄКТАС та системою університету

За шкалою ECTS	За національною системою	Визначення	За системою університету (в процентах)
A	5 (відмінно)	відмінне виконання лише з незначною кількістю помилок	90 - 100
B	4 (добре)	вище середнього рівня з кількома помилками	82 - 89
C	4 (добре)	в загальному правильна робота з певною кількістю грубих помилок	74 - 81
D	3 (задовільно)	непогано, але зі значною кількістю помилок	64 - 73
E	3 (задовільно)	виконання задовольняє мінімальні критерії	60 - 63
FX	2 (незадовільно)	з можливістю перескласти	35 - 59
F	2 (незадовільно)	з обов’язковим повторним курсом навчання	1 - 34

LESSON 1

Text A

Ecology

Ecology is the study of the inclusive nature society with interactions of organism with other organisms and with the physical environment.

Ecology (from Greek: *oikos,* "household"; and *logos,* "knowledge") is the scientific study of the distribution and abundance of life and the interactions between organisms and their environment. The environment of an organism includes physical properties, which can be described as the sum of local abiotic factors such as insolation (sunlight), climate, and geology, and biotic factors, which are other organisms that share its habitat. The word "ecology" is often used more widely in such terms as social ecology and deep ecology and in common parlance (language) as a synonym for the natural environment or environmentalism. Likewise "ecologic" or ecological" is often taken in the sense of environmentally friendly. The term ecology or *oekologie* was coined by the German biologist Ernst Haeckel in 1866, when he defined it as "the comprehensive organism relationship science to the environment". Haeckel did not elaborate on the concept, and the first significant textbook on the subject (together with the first university course) was written by the Danish botanist, Eugenius Warming. For this early work, E.Warming is often identified as the founder of ecology. Ecology is usually considered a branch of biology, the general science that studies living organisms. Organisms can be studied at many different levels, from proteins and nucleic acids (in biochemistry and molecular biology), to cells (in cellular biology), to individuals (in botany, zoology, and other similar disciplines), and finally at the level of populations, communities, and ecosystems, to the biosphere as a whole; these latter strata (levels) are the primary subjects of ecological inquiry. Ecology is a multi-disciplinary science. Because of its focus on the higher life organization levels on earth and on the interrelations between organisms and their environment, ecology draws heavily on many other science branches, especially geology and geography, meteorology, pedology, genetics, chemistry, and physics.

Retell the text according to the questions:

1. What is ecology?
2. What factors does the organism environment include?
3. How did Ernst Haeckel define ecology in 1866?
4. Who wrote the first university course on the subject?
5. How is ecology usually considered?

<u>Practical work.</u>

I. Put the given words into the order to get positive sentences and translate them.

1. The/ major /carbon/ two/ gases/ water/ greenhouse/ vapor/ are /and/ dioxide.
2. This /proved /interaction /to /very/ be/ efficient.
3. Living/ are / in/ organisms /of /use/ inefficient/ they/ energy their receive.
4. Biosphere/ the/ subject/ ecological/ is /of7 inquiry.
5. studies/ Ecosystem/ the energy/ ecology/ flow/ the/ biotic through and/ abiotic/ components.
6. Each /of /an /other /ecosystem/ element/ affects the components.
7. Coal /the/ is/ fossil/ abundant/ most/ fuel.
8. This /examines /science/ ecosystems/ how work.

II. Read the sentences and write the translation

1. It is thought that life has been first developed in the hydrosphere.
2. Water also circulates between the hydrosphere, lithosphere, atmosphere and biosphere in regular cycles.
3. Ecology is usually considered a branch of biology, the general science that studies living beings.
4. Ecology can be studied at several levels, from proteins and nucleic acids (in biochemistry and molecular biology), cells (in cellular biology), organisms (in botany, zoology, and other similar disciplines), and finally at the level of populations, communities, and ecosystems — which are the subjects of ecology.
5. Ecology includes not only the interactions between organisms, but also their interactions with their surroundings.
6. Because of its focus on the broadest level of life and on the interrelations between living beings and their environment, ecology draws heavily on other branches of science, such as geology and geography, meteorology, pedology, chemistry, and physics.

III. Read the sentences and put answers to the questions.

1. Ecology is now more and more a discipline that comprises inquiries of both parts and wholes. What disciplines does ecology comprise?
2. The realization that most whole-world problems require the attention of more than one traditional discipline has resulted in the appearance of many new interactive fields. What whole-world problems require attention nowadays?
3. In ecology, the term population, originally coined to define a group of people, is considered to include groups of individuals of any species that live together

in some area. What groups of organisms plant (bird, plankton) populations comprise?

4. In ecology the term "community" is used in the sense of biotic communities which comprise all the populations living in one area. The communities and non-living environment are functioning together inside the ecological system. What is the parallel form for "ecosystem" in Ukrainian literature? (biogeocoenosis)
5. The major continents and oceans are the biogeographic regions, each with its own special flora and fauna. Give the examples of biogeographic regions.
6. All of the levels in the ecological hierarchy comprise life and biological processes, so we can say that biosphere is the biologically inhabited soil, air and water. What is lithosphere? (rocks, sediments, mantle and core of the earth) What is hydrosphere? (surface and ground water) What is atmosphere?

IV. Disprove the following statements and propose your variant of the sentences

Наприклад: **Things move, change and decay without energy (never). You are absolutely wrong. Things never move, change and decay without energy. Energy is essential for things to move, change and even decay.**

1. The ecology has not reached any importance last years, (significant)
2. The increasing interest of the man by the environment in which it lives must adapt fundamentally to the conscience taking on the problems that interact our planet and demand a quick solution, (affect)
3. The alive beings are in temporarily interactions between each other and with the environment in which they live, (permanent)
4. The ecology analyzes how each ecosystem element is distributed between other components and how this is affected too. (affects)
5. It is a synthesis science, because to understand the complex plot of relations that exist in an ecosystem it takes scientists from botany, zoology, physiology, genetics and other disciplines like physics, chemistry and geology, (knowledge)

V. Read the beginning of the sentence and choose the fitting end to get the whole sentence

1. Ecology is the study of the relationships of organisms...		a) ...by the German biologist Ernst Haeckel in 1866.
2. Ecology comprises elements...		b) …to the environment and of organisms to one another.

3. The term ecology or j *oekologie* was coined ...		c) ...biology, the general science that studies living organisms.
4. Ecology is usually considered a branch of...		e) ...organisms, communities, populations and ecosystems.
5. Because of its focus on the higher life organization levels on earth and on the interrelations between organisms and their environment,...		d)...ecology draws heavily on many other science branches, especially geology and geography, meteorology, pedology, genetics, chemistry, and physics.
6. Main levels of ecological structural hierarchy are...		f) ...from all levels of biological sciences.

VI. Translate into English

1. Поява книги Ч. Дарвіна „Походження видів" у 1859 році стала важливим етапом появі екології як науки.
2. На початку двадцятого століття сформувались наукові школи гідробіологів, ботаніків, зоологів, у кожній з яких розвивались певні галузі екології як науки.
3. Після 40-х років минулого століття живі організми почали вивчатися у їх відношенні до сукупності абіотичних факторів.
4. Об'єктами вивчення екології є популяції організмів, види, угруповування, екосистеми та біосфера в цілому.
5. Екологічну науку поділяють на два основних розділи - загальну і прикладну екологію.

VII. Read the following sentences and agree with them using: **Indeed, According to, To tell the truth, It goes without saying!**

1. Over millions of years, organisms, interacting with geological and chemical processes, changed the environment.
2. Tiny microorganisms released oxygen into the atmosphere and reduced the carbon dioxide level.
3. We are able to breath, drink, and live in comfort because millions of organisms and hundreds of processes are operating to maintain a livable environment.
4. The study of ecology gives us more than practical knowledge. It also shows us the Earth's fantastic beauties and the incredible varieties of life.
5. To understand this complex world at ground level more fully, it is helpful to think in terms of organizational hierarchies levels.

6. So you can think of ecology as the study of relationships among living things and between living things and non-living things in their environment, and environmental science as the study of how people relate to the natural world, in the broadest sense.

VIII. Read the following sentences and prove that they are wrong using: **Though, Overall, Quite the contrary, To tell the truth, Allow me to observe!**

1. The main levels of ecological organizational hierarchies are organisms, cells, populations, mammals, ecosystems.
2. Ecology is the study of certain eco-systems and biomes, while other sciences like Biology look at life in general.
3. Often, people use the term "environmental science" to refer to the pure science of the environment, while "ecology" usually involves the interface between ecological science and the human world, particularly in terms of public policy, natural resource economics, etc.

Text B

Environmental science

Environmental science is an interdisciplinary academic field that integrates physical and biological sciences (including physics, chemistry, biology, soil science, geology, and geography) to the study of the environment, and the solution of environmental problems. Environmental science provides an integrated, quantitative, and interdisciplinary approach to the study of environmental systems. Related areas of study include environmental studies and environmental engineering. Environmental studies incorporate more of the social sciences for understanding human relationships, perceptions and policies towards the environment. Environmental engineering focuses on design and technology for improving environmental quality. Environmental scientists work on subjects like the understanding of earth processes, evaluating alternative energy systems, pollution control and mitigation, natural resource management, and the effects of global climate change. Environmental issues almost always include an interaction of physical, chemical, and biological processes. Environmental scientists bring a system approach to the analysis of environmental problems. Key elements of an effective environmental scientist include the ability to relate space, and time relationships as well as quantitative analysis. Environmental science came alive as a substantive, active field of scientific investigation in the 1960s and 1970s driven by a) the need for a multi-disciplinary approach to analyze complex environmental problems, b) the arrival of substantive environmental laws requiring specific

environmental protocols of investigation and c) the growing public awareness of a need for action in addressing environmental problems.

I. *Write the thesis on the subject of "The History of Environmental Knowledge Formation"*

II. *Read the text and explain the main tasks of ecology*

Principal tasks and problems

The principal problem faced by ecology at the present time is the detailed study, using quantitative methods, of the fundamentals of the structure and functioning of natural and man-made systems. The study of populations, that is, natural assemblages of individuals of a particular species, who are at the same time elements of the species system and of the biogeocenotic system, has shown that populations have complex hierarchical structures. Population ecology studies the distribution of individuals and the age, sex, and ethological (behavioral) aspects of the population, among other things. A central question is that of population dynamics and the related regulatory mechanisms, which are viewed as processes involving intrapopulational mechanisms (for example, competition for food) and biocenotic mechanisms (the effect of predators, parasites, and pathogens and epizootic factors). Many problems in population ecology are solved using model laboratory populations of various organisms. Demographic and mathematical modeling methods are used to evaluate the rate of population growth. The relationship between the genetic composition of a population and its ecological characteristics is one of the problems of evolutionary ecology. Of particular importance is the study of the interaction between populations of different species—competition and predation. In the study of competition, use is made of the concept of ecological niche, for which methods of quantitative analysis are being developed.

Much attention is focused on the study of the structure and functioning of communities (biocenoses) and on the establishment of regularities in the number of species in a community. The relationship between the number and the biomass of different species is also subject to certain rules. The species composition of a community changes in the course of its development (succession); it is also affected by various factors associated with the agricultural activities of man. Another important task is the study of the stability of communities and the ability of communities to withstand (противстояти) adverse conditions.

When studying ecosystems, the opportunity presents itself of quantitatively analyzing the cycle of matter and changes in energy flow accompanying a transition from one feeding level to another. This type of production-energy approach at the population and biocenotic levels makes it possible to compare various natural and man-made ecosystems.

The principal stages in the cycle of matter and the flow of energy are well known for freshwater ecosystems. For some bodies of water, a relationship has been

established between the energy that is fixed by green plants within the body of water itself and the energy that comes in with organic matter from terrestrial ecosystems. Such research makes it possible to attempt a solution of the little-studied problem of the exchange of matter and energy between different ecosystems. Ecology has yet to deal with the complex problem of the quantitative evaluation of production processes in the ocean. Despite great procedural complexities, success has been achieved in production-energy research on land.

The cycle of biogenic elements and primary production in the principal types of and ecosystems have been studied. It has been demonstrated that the total volume of primary production on land is approximately double that of the total production of the world ocean and that the productivity of tropical forests is particularly high. The earth's surface is photographed in the visible and infrared regions of the spectrum from spacecraft in order to evaluate the biomass reserves in terrestrial ecosystems. Research on the utilization of organic matter synthesized by autotrophs has shown that on land only a small portion of organic matter is used directly by herbivorous animals, while the bulk of it, in the form of dead plant tissue, is consumed by saprophagous and saprophytic organisms. In addition to feeding links, other links exist between organisms in ecosystems, particularly those involving metabolic products released by organisms into the environment. They are being actively studied in both terrestrial and aquatic ecosystems.

The study of the biosphere as a whole is particularly important, including the determination of primary production and decomposition worldwide and the global cycle of biogenic elements. These problems can only be solved through the concerted efforts of scientists from various countries.

The diversity of the phenomena studied by modem ecology explains its extensive ties (зв'язки) with numerous natural and humanistic sciences. Population ecology involves genetics, physiology, ethology, biogeography, taxonomy, and demography. Biogeocenology involves landscape science, biogeochemistry, soil science, hydrology, hydrochemistry, climatology, and other environmental sciences. Under the influence of ecology, many biological sciences have begun examining various aspects of life from the ecological point of view. These include environmental physiology (also eco- physiology or physiological ecology), ecological morphology, ecological cytology, and ecological genetics.

Advances in mathematics, physics, chemistry, and philosophy have had a significant effect on ecology. In its turn, ecology has posed new mathematical problems, especially in statistics and modeling. Ecology has made important contributions to the development of ideas about the systems organization of living matter. Ecology's ties with the humanities — sociology, political economy, jurisprudence, and ethics — are growing significantly. Through the study of agrocenoses ecology is closely linked with the entire range of agricultural sciences. Ecology and biogeochemistry together study the processes of migration in the biosphere of biogenic elements, which limit the production of agricultural products.

LESSON 2

I. Read the text. Make a list of the most important points from the text. Write a short summary using your list.

Environment is the sum of all external factors, both biotic (living) and abiotic i nonliving), to which an organism is exposed. Biotic factors include influences by members of the same and other species on the development and survival of the individual. Primary abiotic factors are light, temperature, water, atmospheric gases, md ionizing radiation, influencing thé form and function of the individual.

For each environmental factor, an organism has a tolerance range, in which it is able to survive. The intercept of these ranges constitutes the ecological niche of the organism. Different individuals or species have different tolerance ranges for particular environmental factors—this variation represents the adaptation of the organism to its environment. The ability of an organism to modify its tolerance of certain environmental factors in response to a change in them represents the plasticity of that organism.

The spectrum of electromagnetic radiation reaching the Earth's surface is determined by the absorptive properties of the atmosphere. Biologically, the most important spectral range is 300-800 nanometers, incorporating ultraviolet, visible, and infrared radiation. Visible light provides the energy source for most forms of life. Light absorbed by pigment molecules (chlorophylls, carotenoids, and phycobilins) is converted into chemical energy through photosynthesis. Light availability is especially important in determining the distribution of plants. Photosynthetic organisms can exist within a wide range of light intensities. Full sunlight in the tropics is around 2000 |imol photons • m-2 • s-1. Photosynthetic organisms have survived in locations where the mean light is as low as 0.005% of this value.

Water is ubiquitous in living systems, as the universal solvent for life, and is essential for biological activity. Many organisms have evolved the ability to survive prolonged periods in the total absence of water, but this is achieved only through the maintenance of an inactive state. Water availability remains a primary environmental factor limiting survival on land. Primitive land organisms possess little or no ability to conserve water within their cells and are termed poikilohydric. Examples include amphibians and primitive plants such as most mosses and liverworts. Temperature is a determinant of survival in two ways: (1) as temperatures decrease, the movement of molecules slows and the rate of chemical reactions declines; (2) temperature determines the physical state of water. The atmosphere on Earth is thought to be determined to a large extent by the presence of life. At the same time, organisms have evolved to survive in the atmosphere as it is. The atmospheric constitutents with the most direct biological importance are oxygen (O_2) and carbon dioxide (CO_2). Oxygen makes up

approximately 20% of the atmosphere and is due to the occurrence of oxygenic photosynthesis.

Nitrogen is also required by all organisms but cannot be used by most in the gaseous form. Nitrogen fixation, the conversion of N2 gas into a biologically useful form, occurs in some species of bacteria and cyanobacteria or may be caused by lightning.

Atmospheric gases are important in determining the climate and the light environment. Absorption of electromagnetic radiation by the atmosphere determines the spectrum of light reaching the Earth's surface. Absorption and reflectance of infrared radiation by greenhouse gases such as C02 and water vapor regulate temperature.

Among other environmental factors determining the range and distribution and form of organisms are mechanical stimuli such as wind or water movement, and the presence of metals, inorganic nutrients, and toxins in the air, soil, or food.

The biotic environment of an individual is made up of members of the same or other species. Intraspecific interactions involve the need to breed with other individuals, to gain protection through living in a group, and to compete for resources such as food, light, nutrients, and space.

Humans alter their environment in ways that exceed the impact of all other organisms. For example, the release of greenhouse gases into the atmosphere contributes to climate alterations over the entire planet. This in turn has impacts on the distribution of all other species. The release of pollutants into the environment brings organisms into contact with stresses to which they were not previously exposed. This the evolution of new varieties, eventually perhaps new species, adapted to the polluted environments.

II. Retell the text using the following questions.

1. What types of ecological factors do you know?
2. What reaction of the organism on the abiotic factor’s influence (e.g. temperature) may be observed ?
3. What factors are primary? Secondary?
4. What are the climatic factors?
5. What abiotic factors are essential to life?
6. What are the five factors that affect climate? What factors regulate temperature?
7. What climate factors affect Ukraine?
8. What are the major biotic factors in ecological systems?
9. What are major limiting abiotic factors in deserts?
10. What are the major abiotic factors of the temperate rainforests?
11. What are major biotic and abiotic factors of a lake?

III. Read the following phrases with their translation, write them down into your vocabulary. Use them in the cases when you want to agree or disagree with new information.

1	Namely	а саме
2	I'm very interested indeed in...	Я дуже зацікавлений насправді у...
3	I strongly agree/disagree	Я повністю згоден/не згоден
4	I'm not sure whether	Я не впевнений в тому, що
5	I'm giving a reason for what I've said	Я маю причини так казати

Practical work.

I. Put the given words into the order to get positive sentences and propose your groupmates to translate them.

1. The natural environment,/ on Earth, /and non-living things/ /includes all living/ occurring naturally/
2. It is an environment/ the interaction /that includes / of all living species.
3. The concept/ can be distinguished/ of the natural environment/by two main components.
4. Complete ecological units/ microorganisms, soil, rocks, / include all vegetation,/that occur/ atmosphere and natural phenomena/ within their boundaries.
5. energy, radiation, electric charge,/ Universal natural resources/ air, water, and climate, /and physical phenomena/ are / as well as/ and magnetism, not originating from human activity.
6. A human /genetic /cell /has / contained/material /in the cell /nucleus.

II. Read the sentences. Fill in the gaps using the necessary words and write the answers to the questions.

1. The natural environment is contrasted with the artificial environment, which comprises the areas and components that are

_____***strongly/weakly*** influenced by humans. What is the difference between the natural and artificial environment?

2. A geographical area is regarded as a natural environment, if the human impact on it is kept under a certain limited _____ ***level/factor***. Where can you find a geographical area?
3. Biotic and abiotic_____ ***levels/factors*** are interrelated. What are the two types of environmental factors? What units do they include?
4. If one factor is changed or removed, it_____ ***merges/impacts*** the availability of other resources within the system. Is it necessary to have stable environmental factors?
5. Biotic, meaning of or related to life, are living factors. Plants, animals, fungi, protist and bacteria are all biotic or _____ ***simulated/living*** factors. What factors are abiotic?
6. Abiotic, meaning not alive, are nonliving factors that _____***adapt/affect*** living organisms. What factors affect living organisms?
7. Environmental factors such _____ ***habitat/inhabitant*** (pond, lake, ocean, desert, mountain) or weather such as temperature, cloud cover, rain, snow, hurricanes, etc. are abiotic factors. Do the inhabitants of any city change (alter) the environment?
8. Biotic and abiotic factors _____ ***combine/distribute*** to create a system or more precisely, an ecosystem. What factors does any ecosystem comprise?
9. An ecosystem is a community of living and non-living things _____ ***considered/occupied*** as a unit. What is an ecosystem?
10. If a single factor is changed, perhaps by _____ ***pollution/recycling*** or natural phenomenon, the whole system could be changed (altered). What natural phenomena can alter the environment?
11. For example, humans can alter environments through _____ ***farming/nourishing*** or irrigating. How antropogenic factors influence the environment?

12. While we usually cannot see what we are doing to various ecosytems, the impact is being felt all over. For example, acid rain in _____ ***stable/certain*** regions has resulted in the decline of fish population. How are the antropogenic factors linked with abiotic factors?

III. Write the questions from the given set of words:

1. Ecological factors which can affect dynamic change in a population or species in a given ecology or environments are usually divided into two groups: abiotic and biotic.

How /groups / do you /of ecological/ many / factors/ know?

2. Abiotic factors are geological, geographical, hydrological and climatological parameters. A biotope is an environmentally uniform region characterized by a particular set of abiotic ecological factors.

is /What/a / biotope?

3. Specific abiotic factors include: Water, which is at the same time an essential element to life and a milieu. Air, which provides oxygen, nitrogen, and carbon dioxide to living species and allows the dissemination of pollen and spores. Soil, which is ai the same time source of nutriment and physical support. Temperature, which should not exceed certain extremes, even if tolerance to heat is significant for some species Light, which provides energy to the ecosystem through photosynthesis

factors/ What /specific / abiotic /substances/do /the / include?

4. Natural disasters can also be considered abiotic factors.

natural / are /What / disasters?

5. The existing interactions between the various living beings go along with I permanent mixing of mineral and organic substances, absorbed by organisms for their growth, their maintenance and their reproduction, to be finally rejected as waste. These permanent

recycling's of the elements (namely, carbon, oxygen and nitrogen) as well as the water are called biogeochemical cycles. They guarantee a durable stability of the biosphere.

do /What/ biogeochemical/guarantee?/ the / cycles

IV. Read the sentences choosing the correct words in italics and write as many questions as you can to each sentence.

1. Earth science generally _____ ***manufactures/recognizes*** 4 spheres, the lithosphere, the hydrosphere, the atmosphere, and the biosphere which correspond to rocks, water, air, and life.
2. The outer layer of the planet Earth can be _____***included/divided*** into several compartments: the hydrosphere, the lithosphere, and the atmosphere.
3. The biosphere is all living matter on the planet or that portion of the planet _____ ***occupied/manufactured*** by life.
4. The biosphere is very _____ ***thick/thin*** surface (поверхня) layer.
5. It is thought that life first developed in the _____ ***stratosphere/hydrosphere***.
6. Photosynthetic organisms gradually produced the chemically _____ ***stable/unstable*** oxygen-rich _____ ***atmosphere/lithosphere.***
7. At the ecosystem and biosphere levels, there is a continual _____ ***moving/recycling*** of carbon, nitrogen, hydrogen and oxygen.
8. Water is _____ ***exchanged/merged*** between the hydrosphere, lithosphere atmosphere and biosphere in regular cycles.

V. Translate phrases and sentences into English.

1. Термін „середовище” в екології використовується в широкому і вузькому смислі слова.
2. Середовище існування - це сукупність всіх умов життя, які існують на планеті Земля.
3. Середовище існування - це частина природи, що оточує організм та з якою він взаємодіє.
4. Нейтральні фактори це елементи - середовища, які не можуть впливати | на організм.
5. Термін „середовище існування” означає сукупність абіотичних і біотичних факторів, в яких існує та розвивається жива та нежива матерія та відбувається діяльність людини.
6. Абіотичні фактори – діляться на чотири підгрупи – кліматичні, ґрунтові (едафічні), орографічні (фактори рельєфу), гідрофізичні.
7. Гідрофізичні фактори це вплив води в усіх її станах (твердий, рідкий, газоподібний) та фізичних факторів довкілля (шум, вібрація, гравітація, магнітне та іонізуюче випромінювання) на життя організмів.
8. Біотичні фактори – це вплив живих організмів один на одного.
9. Антропогенні фактори – це сукупність впливу людини на життя організмів.

VI. Disagree with the following phrases and propose your own variant of the answer. Use the phrases ***It would be wrong to conclude; In fact; In my opinion; As far as I know (remember); They say; To tell the truth; I think I disagree with you; I think you are wrong here; I'm afraid it's not quite so; Quite the contrary!***

Example*: As far as I know in ten years the new cheap natural nourish food will is pear - I'm afraid it's not quite so. My own opinion is that natural nourish food will remain so expensive if our civilization had to rely on it and the standard o living would go down a lot.*

1. Most first-generation genetically engineered varieties were designed

to reduce pesticide use or to allow use of more benign (такі, що підвищують родючість почви) chemicals. Farmers of our planet intended to plant genetically modified seed on 74 percent of soybean acreage, 71 percent of cotton, and 32 percent of corn grown for grain in 2012.

2. In his 2000 Nobel anniversary lecture, agricultural researcher Norman Borlaug noted that irrigated agriculture uses 70 percent of global water withdrawals, cove 17 percent of cultivated land (about 679 million acres), and accounts for 4 percent of world food production.

VII. Read the sentences and make questions to them.

1. Every week about 20 species of plants and animals become extinct.
2. Rainforests are being cut down at the rate of 100 acres per minute.
3. One-third of the water used in most homes is flushed down the toilet.
4. A single quart of motor oil, if disposed of improperly, can contaminate up 2,000,000 gallons of fresh water.
5. Plastic bags and other plastic garbage thrown into the ocean kill as many as 1,000,000sea creatures every year.
6. A modern glass bottle would take 4000 years or more to decompose — and even longer if it's in the landfill.
7. Recycling one glass bottle saves enough energy to light a 100-watt bulb for four
8. Energy-saving lightbulbs last around ten times longer than ordinary lightbulbs- over 10,000 hours.
9. A laptop is more environment friendly than a desktop. It consumes five times less electricity.
10. A aluminum can that is thrown away will still be a can 500 years from now!
11. A single tree will absorb one ton of carbon dioxide over its lifetime. Shade provided by trees can also reduce your air conditioning bill by

10 to 15 per cent.

12. Tissue paper (тонкий обгорточний папір) is a major source of waste. It takes 60,00,000 trees to make 1 years' worth of tissues for the world.
13. A ton of recycled paper equals or saves 17 trees in paper production.
14. A plant on your desk acts as a natural filter, absorbing airborne pollutants and computer radiation while replenishing oxygen levels.
15. Lawns only need watering once a week, post rain only after two weeks. Do watering early morning for minimal evaporation and water conservation.
16. Avoiding just 10 miles of driving every week would eliminate about 500 pounds of carbon dioxide emissions a year
17. Turn off the tap when brushing your teeth and soaping your hands. This can save around 10 litres a day. That's 11,000 litres of water per person per year.
18. A dripping tap can waste over 20,000 litres of water every year.

VIII. Read the following statements and prove that they are correct. Use the phrases ***I'm very interested indeed in...; I strongly agree; I'm giving a reason for what I've said.***

1. An ecosystem includes all the living organisms within an area and their physical surroundings. These two features of an ecosystem are described as biotic (living) and abiotic (non-living) factors.
2. The amount of sunlight available for photosynthesis is an important abiotic component for photosynthetic primary producers. It may be affected by weather, terrain, latitude, or other obstructions to sunlight.
3. The available nutrients for organisms, especially microbes, fungi, and plants, play a key role in determining the types of organisms and their abundance as well as the success of communities dependent on these organisms.
4. The amount of available water, water quality, location of water, and

precipitation are major abiotic components of an ecosystem.

5. The geography and geology of an area greatly influence the communities that exist within an ecosystem.
6. Although life as a whole can survive a wide range of temperatures, individual species tend to have relatively narrow temperature requirements. Few species can tolerate a great fluctuation of temperature, and organisms adapted to extremes of temperature have difficulty surviving and competing outside their optimal temperature range.
7. Populations tend to have a maximum density near the center of their geographic range.

IX. Read the following statements and prove that they are incorrect. Use the phrases ***Namely; I strongly disagree; I'm not sure whether***

1. Energy use has impacts only at local levels (national and global).
2. Only pollution from burning fossil fuels, and the associated effects of acid rain have been a problem for European and North American forests, lakes and soils (the impacts on biodiversity).
3. Many forms of energy are the result of a service provided by ecosystems now (laid down in the form of fossil fuels far in the past).
4. The potential limitations by particular environmental factors are best studied by simulations (doing experiments, preferably in the field).

LESSON 3

I. Read the text. Briefly summarize the content of the reading passage. Basically state the topic and the main idea. Give the definition to the concept

"population ecology». Answer the questions that follow.

Population Ecology is a branch of ecology that studies a population as the elementary form of existence of a species. The main objective of population ecology is to investigate the structure and dynamics and the sex and age distribution of anima. populations, which determine fecundity and fertility. Varying with the conditions of existence, fecundity and fertility have an adaptive function, because they ensure a balance between the birth and death rates. Fluctuations in the rate of reproduction determine the density of a population, as well as the animal population dynamics and waves of life.

Distribution Patterns within Populations

There are three common distribution patterns observed among individuals within ; population: *random* (each individual is equally likely to occur anywhere within the population. There are no strong effects of competition or the environment on the distribution), *regular* Teach individual is uniformly spaced within the population. This can be due to competition among individuals for resources or to some regularity in the distribution of resources) and clumped (individuals occur in high density patches, separated by areas with few, if any, individuals. This can be due to mutual attraction among individuals (herds of antelope, bee hives) or attraction to a common resource site (water, food).

Problems with exponential growth

One problem with exponential growth is that the population increases forever, as Ion; as $r > 0$ (it will decrease to zero when $r < 0$). This is possible in some cases, particularly when an organism first invades a new habitat. However, it can't keep up. because eventually the population runs out of resources (like food or water), or growth slows because of pressure from predators or competitors.

Logistic Population Growth

Here we can see the equation. This is called the logistic growth equation, and looks like the exponential equation, just with this additional term 1 - N/K added. K is called the carrying capacity, which is the maximum population size i habitat can hold.

Life tables.

We can look at population growth in some more detail using a life table. It divides the population into distinct groups (ages or stages) rather than treating everyone as or.: big group. The most common life table is a cohort life table in which we follow ah offspring bom at a given time (the cohort) from birth until the death of the last individual. Here are the answers we can get from the life table. 1. Population age structure— Are there lots of: young individuals? Old individuals? 2. Reproductive age individuals?; 3. Population growth rate — How fast is the population size growing (or shrinking)? 4. Population survivorship patterns — Does most mortality occur in the very young? The very old? Or equally across all ages?

Survivorship Curves

A survivorship curve is a plot of the x values (ages or stages) on the horizontal axis, and the l_x values on the vertical axis (A Type I curve occurs when most mortality occurs late in life (older adults); A Type II curve occurs when mortality is spread equally across different ages; A Type III curve occurs when most mortality occurs very early in life (eggs, juveniles).

Population Age Structure

An age structure diagrams is obtained by plotting the number of individuals in each of our age or stage classes (the *x* categories). Diagrams that have a strong pyramid shape have lots of young individuals. Diagrams that are more rectangular have a more even distribution among ages/stages.

II. Answer the following questions:

1. How can we describe a population's distribution?
2. What are three common distribution patterns observed among individuals within a population?
3. Why do we try to estimate population sizes?
4. What values are indicated on the survivorship curve? Draw and

explain.

5. What values can be obtained from the age structure diagram? Draw and explain.
6. What information can you get from a life table? Draw and explain.

III. Retell the text using the above-mentioned questions as a plan.

Practical work.

I. Put the given words into the right order to get positive sentences and propose your groupmates to translate them.

1. Ecosystem/ examines / and biological /ecology /physical /structure /of ecosystem.
2. Modeling/ diverse /offer/ways/ approaches /to analyze/ strategies.
3. The problem/ a multi-lateral / requires /clearly / approach.
4. All/ composed /matter /is / of elements.
5. Inertia /is/ by which / of matter /it remains /a property/ at rest.
6. Predators/ in the economy/ an important/ play/ role/ of nature.
7. Predators /of the whole /on the constitution /influence /community.
8. Plants /a would-be /escape /consumer/ cannot /by running away.
9. population /Density/ is / to a unit / size/ in relation/ of space.
10. in which /Dispersal / is / individuals/the way distributed // are / in space.

II. Write a short monologue with each group of words. Begin your monologue with the phrases *I suppose; I think; It is important to note;*

It is evident that; To be objective. Pronounce it and ask your groupmates to repeat.

Example: a)population, group, organism, species, to find, to occupy, space

To be objective a population is a group of organisms of the same species found occupying a given space.

1. to wish, to compare, to measure, different/same, population, number of, necessan. to have, attribute.
2. Natality, birth rate, to be, rate, individuals, to add, reproduction.
3. Mortality, to be, rate, individuals, to loose, death.
4. Dispersal, to be, way, individuals, to immigrate into, emigrate out of, population.
5. Age, distribution, proportion, individuals, different, ages, population.
6. Exponential, growth, whether, population, society, consumption, fuel, cannot, to continue, for long, danger, disaster.
7. Biological, aspect, ecology, to be, interaction, organisms.

III. *Read the interrogative sentences. Fill in the gaps using the necessary words and write the answers to the questions.*

selection, utilization, approach, constitutes, elaborated, biological

1. What is the most purely _____aspect of ecology? (*interaction of organisms with organisms*).
2. At what levels of organization do natural _____ and genetic mechanisms operate? (*individual, population and community levels*).
3. What are the two ways of energy _____ optimization? (*minimizing time by efficient searching or conversion/ maximizing*

net energy by selecting large easily- converted energy sources).

4. What _____ is essential for the survival of species? (*diversity maintaining at genetic, species, and landscape levels*).
5. Who _____ on the factors of world human population size determination? (*Bongaarts, 1994*).
6. What are the three factors that _____ population growth? (*unwanted fertility, high desired family size, population momentum*)

IV. Read the sentences and write as many questions as you can to each sentence. Propose your groupmates to answer your questions.

1. A population is a group composed of all members of the same species.
2. This group lives in a specific geographical area at a particular time.
3. An example of a population might include all the frogs that live in a certain urban pond.
4. The areas occupied by a population could include the small area (measured in square millimeters) occupied by bacteria in a rotting apple to the vast areas of ocean (square kilometers) that include the territory of migrating white whales.
5. Population ecology studies the structure and changes within a population.
6. Studies of specific populations will indicate the dynamics of the population, in terms of active, ongoing growth; declining growth; or stability.

V. Read the word-combinations in English and pick up their Ukrainian Equivalents from the list that follows. Time limit is 45 seconds.

performance sampling approach	

standard approach	
svstems approach	
integrated circuit	
integrated development environment (IDE)	
selection criterion	
to make a selection	
to constitute a match	
foreign matter	

непридатні умови, критерій відбору, давати відповідність, інтегроване середовище розробки, робити вибір, стандартний (традиційний) підхід, інтегральна схема, метод вибіркового обстежування в робочих умовах, системний підхід

VI. Translate phrases and sentences English.

1. розуміти повністю;
2. Дослідники підтвердили наційніст законодавчого підходу до вирішенн задачі.
3. природний відбір;
4. Природний відбір є віднosн безпечним процесом для екологічне рівноваги.
5. розпізнавати види;
6. Розпізнавання нових видів у природі є повільним процесом.
7. використовувати енергію;
8. Другий трофічний рівень утворюют первинні консументи - травоїди тварини (фітофаги), які їдять та перетравлюють рослини;
9. Третинні користувачі це м’ясоїдні що харчуються вторинними консументами, утворюють четвертий трофічний рівень.

VII. *Disagree with the following phrases and propose your own variant of the answer. Use the phrases* **On the one hand... on the other hand; This is evident from; It is important to note that; To my mind; To be objective.**

Example: *a) Theory exists without practice. -You are absolutely wrong! To my mind any theory does not exist without applied science.*

1. Population ecology is a major sub-field of biology that deals with the dynamics of species populations and how these populations interact with the environment.
2. Population ecology is concerned with the study of groups of plants that live together in time and space.
3. A population in an ecological sense is a group of organisms, of the different species, which roughly occupy the various geographical area at the same time.
4. Individual members of the same population can neither interact directly, nor interact with other members of the same population.
5. Population members never interact with a similar environment and experience similar environmental limitations.

VIII. Answer the question Which factors, if either, are more important in controlling papulation growth: physical or biological? in the written form using the following frimmar phrases. The beginning is given for you.

Physical factors may play a dominant role, and are called density independent regulation, since population density is not a factor. The other extreme has biological tutors dominant, and is referred to as density dependent regulation, since population density is a factor. It seems likely that one or the other extreme may dominate in some environments, with most environments having a combination control.

Factors: the loss of all individuals, environmental change, infectious disease, unplanned releases of substances into the air and water, increased bacterial populations, more-tolerant-to-pesticide species, less tolerant competitors, reduce predator populations

IX. Read the following statements and prove that they are correct giving examples. Some examples are given to you. Use phrases *I really agree with you; I couldn't' agree with this more; Can't say I don't agree*

1. Ecological interactions are classified as intraspecific or interspecific interactions an as harmonious or inharmonious interactions.
2. Intraspecific ecological interactions are those between individuals of the same species. Interspecific ecological interactions are ecological interactions between individuals of different species.
3. Inharmonious, or negative, ecological interaction is that in which at least one of the participating beings is harmed.
4. Harmonious, or positive, ecological interaction is that in which none of the participating beings is harmed.
5. The main harmonious intraspecific ecological interactions are colonies and societies.
6. The main inharmonious intraspecific ecological interactions are intraspecific competition and cannibalism.
7. Colonies are functional integrated aggregates formed by individuals of the same species. Colonies are often confused with a single individual. (the coral reefs, by-the-wind sailors and filamentous algae).
8. Societies are interactions for labor division and collaboration among individuals the same species. (Human societies are examples of ecological societies; other species like bees, ants, termites, wolves and dolphins, also form societies).
9. Competition is the ecological interaction in which the individuals

explore the same ecological niche or their ecological niches partially coincide and therefore competition for the same environmental resources takes place. Competition is harmful for all participating beings and thus it is classified as inharmonious (negative) ecological interaction.

10. Mutualism is the ecological interaction in which both participants benefit and that is obligatory for their survival. Mutualism is a harmonious (positive) ecological interaction. Mutualism is also known as symbiosis.

X. *Read the following statements and prove that they are incorrect giving examples. Some examples are given to you. Use the phrases* **What about?, What's the difference? In fact, I am not 100% sure.**

1. Parasitism is positive ecological interaction in which a being lives at the expense of another. The parasite often does not cause immediate death of the host since it needs the host alive to survive.
2. Predatism is the ecological interaction in which one individual mutilates or kills another to get food. Predatism is a harmonious (positive) ecological interaction
3. Herbivorism is a form of predatism in which first order consumers feed from producers (plants or algae). (For example, birds and fruit, humans and edible vegetables, the bacteria that causes tuberculosis, tree (host) and parasitic helminths (parasite), dog (host) and lice (parasite), etc.)
4. Ammensalism is the ecological interaction in which an individual harms another without obtaining benefit. Ammensalism is an harmonious (positive) ecological interaction since one participant is harmed.

5. A population in an ecological sense is a group of organisms, of the different species, which roughly occupy the same geographical area at the same time.

LESSON 4

I. Read the text. Pay attention to the phases of habitat formation. Answer the questions that follow.

The habitat is defined as a specific place occupied by an organism. It can also be occupied by the population or community. It may occur in the biotic or environment. It is also defined as the addition of environmental factors which vital role in the existence of individual or population or community. The ha more specific than the environment. The habitat is a combination of many facto habitat refers to a large area which can be pond, desert, grassland and woodland be small like a bark (дупло) of tree or burrow (нора). The organism known as tubifex (трубочник) lives in the running and fresh water which is rich in the organic matter. The larva (личинка) of chironomous has no oxygen but lives in the water. The malarial parasites live a dual life and live in the red blood cells and liver. Some organism like hilsa can live in the fresh as well as marine water. They can adapt according environmental factors.

The habitat consists of microhabitat and they are specific due to the presence of environmental factors. It refers to floor of forest, muddy bottom and surface of pond including its edge.

The ecological niche is also a specific place and it tells about the role of species the ecosystem. It depends upon many factors. The type of food, predator, range of movement and tolerance, shelter, microclimate, building of nest, season of the year and time of the day, effect of the other components and the availability of food. It

is also known as the sum of all interactions of a species with the environment. The owls and cats feed on shrews and mice so they occur in the same niche with having different habitats. The giant water bug and water boatman occur in the same area common habitat. But the giant water bug is predator and the water boatman is a scavenger. Similarly, the two species of birds of ploceus share the same hat they feed on different eatables. They reside in the nest. There are certain which are scavengers and share the same niche. The tadpole eats plants while eats the animals. The rat flea larva is scavenger and the adult one is a parasite, single organism shows a different niche with the ecological succession. The h referred as an organisms address and the ecological niche is referred as an o profession. These definitions were given by E. Odum.

Succession may be initiated either by formation of new, unoccupied habitat (e.g., a lava flow or a severe landslide) or by some form of disturbance (e.g. fire windthrow, logging) of an existing community.

The former case is often referred to as primary succession, the 1 secondary succession. The trajectory of ecological change can be influenced conditions, by the interactions of the species present, and by more stochastic such as availability of colonists or seeds, or weather conditions at the time of disturbance.

Some of these factors contribute to predictability of successional dynamics; others add more probabilistic elements. In general, communities in early succession will be dominated by fast-growing, well-dispersed species (opportunist, fugitive, or r-selected life-histories). As succession proceeds, these species will tend to be replaced by more competitive (k-selected) species.

II. Answer the questions:

1. How do we call the place occupied by organisms? Where the habitat can be found?
2. What factors does the habitat consist of?

3. What specific place tells about the role of species in the ecosystem?
4. What does the ecological niche tell us about? What factors does ecological niche depend upon?
5. How is succession initiated? What dynamics can be observed in succession?
6. What is organism address and profession?
7. Who gave these definitions to the organism?
8. What kinds of ecological succession do you know?
9. What is successional dynamics?

III. Retell the text using the questions from exercise 2 as a plan.

Practical work.

I. Put the given words into the order to get positive sentences and propose your groupmates to translate them.

1. Odum (1959) / considered that / as essentially "species ecology" / and ecosystem ecology, / synecology should be / community ecology, / divided into population ecology, / defining autecology/.
2. autecology / The older term, /—the study of individual species in relation to the environment / —or community ecology / (from oikos, "household"; logos, "knowledge"), / coming from the division / refers to roughly the same field /of study, / of ecology into autecology—and synecology/—the study of groups of organisms in relation to the environment/.
3. Primary succession / change/ inhabited by organisms./in species composition/ over time /in a habitat /not previously /
4. Secondary succession / change/ by previous organisms./over time/ in species composition/ in a habitat/ already modified/

II. Read the sentences. Fill in the necessary words instead of the gaps and write the sentences. Make them interrogative and write the questions.

Biotic, autotrophic (2), plants (2), light, producers, photosynthesis, food, carbon dioxide, stratum

1. Ecosystems have two major _____ components.
2. First is an _____ (self-nourishing) component, able to fix _____ energy and manufacture _____ from simple inorganic substances (e.g., water, _____ _____, nitrates) by the process of _____.
3. Generally, the green _____ vegetation on land, algae (водорості) and water _____ in aquatic habitats-constitute the _____ component.
4. These organisms may be thought of as the _____.
5. They form an upper "green belt" or _____ (layer) where the sun energy input is the greatest.

Heterotrophic, autotrophs, soil, consumers, consuming, organisms, microorganisms, decomposes, heterotrophs, food, network, niche

1. The second major unit is the _____ (other-nourishing) component, which utilizes, rearranges, and _____the complex materials synthesized by the _____.
2. Fungi, nonphotosynthetic bacteria and other _____ , and animals, including humans, constitute the _____ , which concentrate their activities in and around the "brown belt" of _____ and sediment below the green canopy.
3. These _____ may be thought of as the _____, since they are unable to produce their own _____ and must obtain it by _____ other organisms.
4. The autotrophic and heterotrophic components are linked together in a _____ of energy transfers called a food web.
5. The ecological _____ is not a notion of quantitative population ecology despite of several attempts to define it quantitatively.

III. *a) Attention! Game! The winner is the student who will be the first in making questions from the given set of words.*

b) Propose your groupmates to write the answers to your questions

1. Ecological succession is the changing sequence of communities that live in an ecosystem during a given time period.

is / ecological /What/ succession?

2. Primary ecological succession is the changing sequence of communities from the first biological occupation of a place where previously there were no living beings. For ample, the colonization and the following succession of communities on a bare rock. Secondary ecological succession is the changing sequence of communities from the substitution of a community by a new one in a given place. For example, the ecological succession of the invasion of plants and animals in an abandoned crop or land.

What/is/primary and secondary/the difference/between/ecological /succession?

3. The climax stage is the stage of the ecological succession in which the community of an ecosystem becomes stable and does not undergo significant changes. In the climax community practically all ecological niches are explored and greater biodiversity is possible. In this stage the biomass, the photosynthesis rate and the cellular respiration reach their maximum levels and thus the net primary production (NPP = organic material made by the producers - organic material consumed in the cellular respiration of the producers) tends to zero.

stage / What /is / an ecological /the climax/ of/ succession?

4. There were numerous definitions of ecological niche. Grinnell (1917) defined it as all the sites where organisms of a species can live (where conditions are suitable for life). Elton (1927) described the niche as the function performed by the species in the community of which it is a member. The first definition emphasized the "address" of e species and the second one emphasized its "profession" (Miller 1967).

niche /Can / the ecological/ we /define /quantitatively?

5. Hutchinson (1957) defined a niche as a region in a multi-dimensional space

of environmental factors that affect the welfare of a species. This definition is more close to Grinnell's definition. It became popular because the range of tolerance to ecological factors can be easily measured, whereas species "profession" is hardly measurable. It is believed that the intensity of competition is proportional to the degree of niche flapping.

Do/ from/ niches / geographical /change/ region/ one/ to another?

6. Community ecology is the study of the distribution, abundance, demography, and interactions between populations of coexisting species. It is part of the division of ecology known as synecology that studies the organization of ecosystems specifically at the level of the biotic community (or biocenoses). Community ecology focuses on relationships between species, including the study of food webs, energy flow, and nutrient flow.

between /What / synecology/the differences / are / and autecology?

*IV. Read the sentences and write as many questions as you can to each sentence. Propose your groupmates to answer your questions***.**

1. Synecology is a branch of ecology concerned with biocenoses, that is, communities of many species of animals, plants, and microorganisms.
2. The term “synecology” was proposed by the Swiss botanist C. Schröter in 1902 and adopted by the Brussels International Botanical Congress in 1910 to designate the body of knowledge relating to plant communities, or phytocenoses.
3. Thus, synecology originally was a synonym for phytocenology.
4. Most phytocenologists eventually regarded synecology simply as the part of phytocenology embracing the ecological study of phytocenoses.

V. Translate into English

розділяти

1. Аутекологія: Вивчення взаємозв'язків між окремими організмами одного і того ж виду або популяції і навколишнього їх середовищем називають аутекологією / екології видів

різноманітні види

2. Вивчення взаємозв'язків між різними видами організмів і навколишнього їх середовищем називають синекологія / екології угруповань

кругообіг поживних речовин

3. Функціональні аспекти екосистеми включають переробку поживних речовин в рамках системи.

зберігати фізичне оточення

4. Потік енергії або кругообіг поживних речовин є важливими для угруповання для того, щоб зберегти його фізичного оточення.
5. Абіотичні і біотичні компоненти в екосистемі пов'язані один 3 одним через потік енергії та утилізацію поживних речовин в системі.

підтримувати життя

6. Загальне оточення, що підтримує життя називається біосферою або екосферою.
7. Сукупність популяцій різних видів мікроорганізмів, рослин і тварин, що мешкають в даному середовищі проживання називається біотичним угрупованням (біоценозом).
8. Генетичне різноманіття може у подальшому послабити біоценоз.

VI. Disagree with the following phrases and propose your own variant of the answer. Use the adverbs ***accordingly, also, anyhow, furthermore, however, moreover, otherwise, still, therefore.***

Example: a) *Theory exists without practice. -You are absolutely wrong. Anyhow theory does not exist without applied science.*

1. Ecology is a narrow discipline comprised of many sub-disciplines, (broad)
2. The common, broad classification of ecology subdisciplines is moving from highest to lowest complexity, where complexity is defined as the number of entities and processes in the system under study, (lowest to highest)
3. Physiological Ecology (or ecophysiology) and Behavioral ecology examine adaptations of the environment to its individual, (individual to its environment).
4. Population ecology (or autecology) carefully studies the dynamics of populations of abiotic factors (of a single species).
5. Community ecology (or synecology) attentively focuses on the interactions between species within individuals (within an ecological community).
6. Ecosystem ecology directly studies the flows of sunlight and x-rays through the biotic and abiotic components of ecosystems (flows of energy and matter).
7. Landscape ecology examines processes and relationship across multiple ecosystems especially across very large geographic areas.

VII. Read the beginning of the sentences and pick up the ending in one minute.

The habitat and the ecological niche

1	Two concepts in relation with the one of ecosystem	that bring together the natural conditions where a species lives and to which it is adapted.
2	The habitat is the physical place of an ecosystem	***are the one of habitat and the one of ecological niche.***
3	The ecological niche is the way in which an organism	that species needs to live and to reproduce in an ecosystem.
4	It includes the physical training conditions, chemical and biological	are some of the physical and chemical factors that determine the niche of

		species.
5	The temperature, the humidity and the light	is related to the biotic and abiotic factors of its environment.
6	Between the biological conditioners they are the type of feeding, the predators, the competitors and the diseases,	that is to say, species that compete by the same conditions.

VIII. Translate into English

1. Отже, навіть всередині виділеного біоценозу можна виділити біотичні взаємозв'язки.
2. Тим більше, системний аналіз дозволяє визначити однорідність умов існування організмів в даному угрупованні.
3. Кожна популяція існує в певному місці, де поєднуються абіотичні та біотичні фактори.
4. Видове різноманіття завжди вище тоді, коли процес диференціації є ефективним.
5. Як правило, чим більше екосистема за розміром, і чим багатший і різноманітніший її видовий та популяційний склад, тим вона стійкіша.
6. Сталість найважливіших екологічних параметрів біоценозу (розмірів, видового складу, біомаси, продуктивності) називається гомеостазом.

IX. Read the following statements and prove that they are correct. Use the phrases ***Naturally, Precisely, Just so, Exactly, Accordingly, Also, Anyhow, Furthermore***

Example: a) As compared with the second law, the third law of motion is built on the first two.

- ***Usually whenever one object exerts a force on another object, the second always exerts an equal force back on the first.***

1. The biotic community is defined as a collection of different populations

which reside at one place.

2. Populations interact with one other in many ways.
3. The habitat includes pond community, lawn community, and forest and grass land community.
4. In some cases plants, animals and the microbes are studied separately. They are known as plants, animals and the microbe community respectively.
5. The biotic community determines the nature of community. It can be biotic or abiotic.
6. There is a frugivorous community which is also known as the fruit eating community. It includes the fruit eating animals such as insects, rodents (гризуни) and bats (кажани).
7. Communities tend to be constantly changing.

X. *Read the following statements and prove that they are incorrect. Use phrases* ***However, Moreover, Otherwise, Therefore, Anyhow, Furthermore*** **and useful information given in brackets.**
Example: a) Aristotle's model of the universe took into account the charted movements of the heavenly bodies, but was complicated by the assumption that Earth lay at the end of the universe.
– I am afraid it's not quite so. Anyhow, Aristotle's model of the universe took into account the charted movements of the heavenly bodies, but was complicated by the assumption that Earth lay at the center of the universe.

1. The population can be isolated, (cannot be isolated)
2. One population depends upon fungi for survival. (the other population)
3. The food, shelter and oxygen are provided by the plants to animals. The animals get carbon dioxide, food and pollination (опилення) from the carnivores (м'ясоїдні тварини). (from the plants).
4. There are certain features of ecosystem which include trophic organization, stratification, dominance, variety of species and the interactions between different species. (of the biotic community)

5. A trophic organization is a chain of producers, consumers and decomposers. One of e species depends on the different species. (dominates out of all)
6. The population of each habitat has a particular stratum which is defined as a grouping of plants in well defined layers. The members of different species also interact with each other. (each species)

LESSON 5

I. Read the text. Discuss given information and try to propose your own definition to characterize the temporary and permanent ecosystem.

The ecosystem is defined as a unit of biosphere which has the structural and functional aspects. It consists of the community and physical environment including interactions between them. It was introduced in the year 1935 by the Tansley.

The ecosystem can be temporary which includes the rain water pond. It can be permanent also. They may be natural which includes the rivers. They are also manmade which includes the aquarium. It can be small which includes the pond or a drop of water. It can be large which includes the ocean. There is a small ecosystem own as the micro ecosystem. The distinct community consisting of number of different species forms an ecosystem.

The ecosystem consists of two components which are known as the biotic and abiotic. The biotic component includes the autotrophs, heterotrophs and the reducers. They form the living members of an ecosystem. These components are related by the food mainly. The food transfers the matter and energy to the outside world. The autotrophs are also known as the producers. They make the food by the process of photosynthesis from the inorganic materials. They not only make their food but also r the other organisms. They absorb the energy from sun and convert into the chemical energy. They release oxygen. The organic compounds release energy during respiration. They are also referred as the transducers as they can convert one form of energy to the other form. The organic compounds which are

formed play an important role in the building of bodies and help in the release of energy. They maintain the ratio of gases which help to maintain the balance of nature. The heterotrophs are not able to make their own food. It includes the zooplankton, larvae, bugs, higher animals and vertebrates. They are also known as the consumers. They are of different types. Basically, they are of herbivores and carnivores type. The herbivores are known as the first order consumers and they feed on plants. The carnivores are known as the second order consumers and they feed on animals. The herbivore animals include deer, mouse, rabbit, squirrel and cattle. Some of them also occurs in the aquatic areas and include the crustaceans, molluscs and protozoan. The carnivore includes the frog, bird, fish, snakes, jackal and wild cat. There are few organisms which feed on the primary carnivore and are known as the third order consumers. It includes the owl, fish, tiger and lion. These are also known as secondary carnivores. They act as a food for the tertiary carnivore. There are certain carnivores which cannot become food for the other organism. They occur at the top of food chain. It includes the lion. The reducers are also known as the decomposers. They include the bacteria and fungi. They decompose he food and act on dead plants. They are also known as the saprotrophs and are referred as a rotten feeder. They secrete (виділяти) the digestive enzymes which act on he food. The microorganisms absorb (усмоктувати) the digested food and the remaining food acts as a mineral to the substratum and this process is known as mineralization. They are also known as the micro consumers as they are small in size. The living beings are also differentiated into the parasites and detrivores by some authors. The parasites include the bacteria, fungi and protozoa. The detrivores are also known as scavengers which feed on the dead bodies. It includes the termites and beetles. They dispose the dead bodies. The abiotic factors play a crucial role in the ecosystem. The sunlight variations, changes in the temperature and humidity, rainfall mineral and substratum availability play an important role to determine the growth of ecosystem. They are of different types. They are mainly divided into climate am edaphic factors. The climate is formed due to the interaction between the solar radiations of different spheres of earth. The edaphic factors are related

with the soil.

II. Answer the following questions:

1. What is an ecosystem?
2. What are autotrophic beings? What are heterotrophic beings?
3. What are the processes that autotrophic beings use to produce organic material from inorganic substances?
4. What is the primary energy source for life on earth?
5. What is the main means by which autotrophic beings obtain energy?
6. Which is the autotrophic group responsible for the production of most part of the molecular oxygen of earth?
7. In the ecological study of food interactions, what are the autotrophic beings called?
8. How are the heterotrophic beings divided in the ecological study of foo interactions?
9. What are primary consumers? Can a food chain present quaternary consume: without having secondary or tertiary consumers? Can a tertiary consumer of one chai be a primary or secondary consumer of another chain?

III. Retell the text according to the abovementioned questions.

Practical work

I. Put the given words into the order to get positive sentences and translate them.

1. means /Sustainability/ and continued/ maintenance/ existence.
2. The more /complex / it is / the ecosystem, / is/the more /sustainable/
3. Indeed, / are endangered/ entire/ ecosystems / species./along with/ individual /
4. When / persist./ humans / the landscape,/ many/ change /species /nevertheless/ manage to /
5. A habitat /is / location / lives./in the environment/ where/ the actual/ an organism/
6. Age structure /refers to/ in each age group /the relative proportion /of individuals/ of a population. /
7. refers to / In general, /environment / of an object./the surroundings /

II. Make and write questions from the given set of words.

1. The first principle of ecology is that each living organism has an ongoing and continual relationship with every other element that makes up its environment. An ecosystem can be defined as any situation where there is interaction between organisms and their environment.

the causes / of the destruction/ What /are/ of ecosystem?

2. The ecosystem is composed of two entities, the entirety of life, the biocoenosis and the medium that life exists in the biotope. Within the ecosystem, species are connected and dependent upon one another in the food chain, and exchange energy and matter between themselves and with their environment.

between /What/ is organisms/ /the interaction/ in an ecosystem?

3. A biome is a large area with similar flora, fauna, and microorganisms. Most of us are familiar with the tropical rainforests, tundra in the arctic regions, and the evergreen trees in the coniferous forests. Each of these large communities contain species that are adapted to its varying conditions of water, heat, and soil. For instance, polar bears thrive in the arctic while cactus plants have a thick skin to help preserve water in the hot desert.

is /What / a / desert?

4. Most of us are confused when it comes to the words ecosystem and biome. What's the difference? There is a slight difference between the two words. An ecosystem is much smaller than a biome. Conversely, a biome can be thought of many similar ecosystems throughout the world grouped together. An ecosystem can be as large as the Sahara Desert, or as small as a puddle or vernal pool.

is /What/ ecosystem ?/larger/ biome / or

5. In an ecosystem, the connections between species are generally related to food and their role in the food chain. There are three categories of organisms: Producers - usually plants which are capable of photosynthesis but could be other organisms such as bacteria around ocean vents that are capable of chemosynthesis. Consumers - animals, which can be primary consumers (herbivorous), or secondary tertiary consumers (carnivorous). Decomposers - bacteria, mushrooms which degrade organic matter of all categories and restore minerals to the environment.

role of / What / the plants /in the /is /ecosystem?

6. The more complex the ecosystem, the more sustainable. Key components of ecosystem sustainability include species diversity and healthy habitat structures interwoven at many levels. A strong bottom layer to the energy cycle is also a k component to sustainability.

necessary/ for ecosystem/ What/ is / sustainability?

III. Read the sentences and write as many questions as you can to every sentences. Work in pairs.

1. The ecosystems do not occur alone. They are always in contact with the adjacent ecosystems. Their boundaries are not well defined and they may overlap.

2. There are certain areas where ecosystem boundaries are well defined, for example they include the pond and land ecosystems.
3. There is an exchange of inorganic nutrients between common organisms ecosystems. There are certain birds like Siberian cranes which visit the Bharatpur sanctuary in Rajasthan in the winter season. The element phosphorous which is present in the sea is brought to land by the sea birds.
4. The Himalayas also have this element phosphorous and is brought to the land by help of certain rivers like Ganges, Brahmaputra and Yamuna.
5. The boundaries of ecosystem do overlap and this overlapping area is known as transition zone.
6. The transition zone is also known as the ecotone. It can be wide or narrow. It can be wide in the cases of taiga forests, temperate deciduous forests and evergreen chaparral forests. The tropical rain forest and savannah along with the grasslands are also included under it. These areas have the plants and animals of both the ecosystems.

IV. Translate phrases and sentences into English.

1. Велика частина екологічних досліджень є пов'язаною з розподілом та великою кількістю організмів і тим, як на них впливають характеристики і властивості навколишнього середовища: організми впливають на їх навколишнє середовище або воно впливає на них.
2. Екологія, або захист навколишнього середовища, стала необхідністю. Без неї життя на нашій планеті не може бути стійким.
3. Близько 5% сонячної енергії поглинається фотосинтезом
4. Крім того, рослини поглинають поживні речовини з ґрунту, які містять енергію у формі різних хімічних сполук.

5. Шість хімічних елементів, необхідних для підтримки життя на планеті Земля, а саме: водень, кисень, вуглець, азот, фосфор і сірка містяться в цих мінералах.

V. *Read the following statements and prove that they are correct. Use the phrases* ***I'm with you on this; I accept your point; I'll take it***

1. Ecosystem ecology is the integrated study of biotic and abiotic components of ecosystems and their interactions within an ecosystem framework.
2. This science examines how ecosystems work and relates this to their components such as chemicals, bedrock, soil, plants, and animals.
3. Ecosystem ecology examines physical and biological structures and examines how these ecosystem characteristics interact with each other.
4. Ultimately, this helps us in understanding how to maintain the high quality water and economically viable commodity production.
5. A major focus of ecosystem ecology is on functional processes, ecological mechanisms that maintain the structure and services produced by ecosystems.
6. These include primary productivity (production of biomass), decomposition, and trophic interactions.

VI. *Read the following statements and prove that they are incorrect. Use phrases* ***I partly agree; It's partly true; Sorry, I can't accept this; Everyone has its on opinion, right?***

1. Adjacent ecosystems closely interact but rarely are interdependent for maintenance of community structure and functional processes that maintain productivity and biodiversity.

2. An individual ecosystem is not composed of populations of organisms, interacting within communities, and contributing to the cycling of nutrients and the flow of energy.
3. The ecosystem is the principal unit of study in population ecology.
4. Cycling of energy and matter at the organism level are often examined in ecosystem ecology.
5. Ecosystem ecology does not approach organisms and abiotic pools of energy nutrients as an integrated system.
6. Energy and matter flows through an ecosystem, adapted from the Silver Springs model. TC are herbivores, D are carnivores, H are top carnivores, and C decomposers. Squares represent biotic pools and ovals are fluxes or energy or nutrients from the system.

VII. Make up a dialogue using the following phrases in the cases when you want to agree or disagree with new information.

1. I'm with you on this;
   I accept your point;
   I'll take it.
2. I portly agree;
   It's partly true;
3. Sorry, I can't accept this;
   Everyone has its own opinion, right?

VIII. Write the short monologue in which give the one-sentence definition of the ecosystem, beginning with phrases:

As far as I remember; In fact; I suppose; To my mind; To my opinion.

IX. Read and translate into Ukraine.

The ecosystem consists of two components. These components are known as the biotic and abiotic components. The biotic component includes the autotrophs, heterotrophs and the reducers. The autotrophs, heterotrophs and the reducers form the living members of an ecosystem. The autotrophs, heterotrophs and the reducers are related by the food mainly. The food transfers the matter and energy to the outside world. The autotrophs are also known as the producers. The autotrophs make the food by the process of photosynthesis from the inorganic materials. The autotrophs not only make the autotrophs food but also for the other organisms. The autotrophs absorb the energy from sun and convert into the chemical energy. The autotrophs release oxygen. The organic compounds release energy during respiration. The autotrophs are *z* referred as the transducers as the autotrophs can convert one form of energy to other form.

X. Natural Disasters.

Famine and flood

1. *Put each of the following words or phrases in its correct place in the passage,*

drought famine starve starvation cut off
helicopters drop flood drown

If a country has no rain for a long time, this dry period is called a (a) _____. In countries dependent on their agriculture, this can lead to a period of (b) _____ when there is not enough food and people actually (c) _____ (die o 'hunger). They die of (d) _____. When it rains very heavily and the land is under water, this if called a (e) _____. In this situation people and animals can (f) _____. Sometimes (g) _____ have to (h) _____ food supplies to people in areas which are (i) ____ .

Earthquake and epidemic

2. *Instructions as above.*

medical teams trapped epidemic toll outbreak

rescue teams rubble casualties collapse earthquake

In some parts of the world, the ground shakes from time to time. This is called an (a) _____ and if it's a bad one, the number of (b) _____ (dead and injured people) is sometimes large. Building often (c) _____ and (d) _____ have to search for people who are (e) _____under the (f) _____. Sometimes water supplies are affected and there is an (g) _____of disease, called an (h) _____. (i) _____ are sent by the government to help the sick. The death (j) _____ can reach hundreds or even thousands.

Fire

3. *Instructions as above.*

on fire fire engine under control fireman

put out fire brigade overcome arson

During the night it was reported that a house was (a) _____ . Someone phoned the (b) _____ and a (c) _____ was sent to the house. One (d) _____was (e) _____ by smoke and taken to hospital, but in half an hour the fire was (f) _____ and after another half hour it was finally (g) _____. At first the police thought it was an accident, but later they found matches and a petrol can and began to suspect (h) _____.

4. *Put one of the following words in each space in the sentences below.*

for in of to from off under by

(a) Many people died _____ starvation.

(b) There are earthquakes in Japan _____ time_____ time.

(c) Food supplies are dropped ____ people whose homes are cut_____ .

(d) Rescue teams searched _____injured people.

(e) There was a drought _____ ten month _____Central Africa.

(f) Many people were trapped _____ the rubble of the building which had collapsed.

(g) Medical teams were sent _____ the government.

LESSON 6

Ecology: Degrees of Difference

Read the text. Discuss given information and make a list of the most important points from the text.

Text A

In the third of a series of articles on the Copenhagen Consensus project, we look at climate change*

Global warming looms, in many people's minds, as one of the biggest threats facing the planet. Over the past 20 years researchers have gathered evidence that the burning of fossil fuels is causing temperatures to rise. However, the exact pace of global warming, as well as the size of mankind's contribution to the warming trend, remain uncertain. Aside from these issues is the question of precisely how greenhouse-gas emissions should be abated, assuming that they need to be reduced at all. In a new paper for the Copenhagen Consensus project, William Cline of the Centre for Global Development and the Institute for International Economics examines these topics.

Rising temperatures are capable of causing great economic harm-though a lot depends not just on how big future rises prove to be but also on how quickly they happen. One estimate is that a doubling of atmospheric concentrations of carbon

dioxide would cost between 1% and 2.5% of global GDP, depending on what kinds of damage you include.

One study from America's Environmental Protection Agency listed the possible costs. Around a quarter of the total economic damage would fall on farmers, who could no longer use some lands. Around a sixth of the total cost would come in the form of increased cooling costs for homes and offices (net of the reduced costs of heating). Rising sea levels, damage to drinking-water supplies and heatwaves would each account for 10%. Deforestation and rising ozone pollution together would add another 10%. And the economic estimates exclude the "amenity value" - the price people would be willing to pay to avoid rising temperatures for reasons of convenience.

Yet totting up such figures is far from straightforward. That is because applying cost-benefit analysis to climate change is harder than for most public-policy questions: many of the benefits will not be realised for decades or centuries, while the costs of abatement will be felt today.

Using a discount rate of, say, 3-6%, which would be typical for most short-term projects, would cause you nearly to ignore any costs and benefits occurring in 100 years' time. Mr. Cline uses a discount rate of just 1.5%, which has the effect of making the future benefits of slowing global warming much more attractive than they would be under traditional analysis. So he can certainly not be accused of minimizing the pain of global warming for future generations, nor of hyping the economic costs of abatement in the near future.

On the other hand, the rationale for the use of a much lower rate is unclear. To say that without using such a rate, abatement would be minimal is not a very persuasive reason. That way of thinking fails to demonstrate that strong abatement is necessary; in effect, it merely assumes it to be necessary. Be that as it may, using such discounting and a widely cited model developed by William Nordhaus of Yale University, Mr. Cline then considers three possible remedies.

Text B

Kyoto Revisited

One is the Kyoto treaty. The goal of that agreement was to freeze rich countries' carbon emissions at 5% below their 1990 levels, while letting poor countries emit as much carbon as they please. According to Mr. Cline, slowing global warming in this way would yield benefits totalling $166 trillion (in 1990 prices, as are all of the following figures). The costs of abatement amount to $94 trillion, giving a global benefit-to-cost ratio of 1.77. But the costs and benefits are unequally shared in the Kyoto approach. Industrial countries must cut back heavily on carbon emissions and realize comparatively few benefits: for them, the benefit-to-cost ratio is far less than one. That helps explain, argues Mr. Cline, why many rich countries refuse to sign the Kyoto treaty.

Mr. Cline next considers a global carbon tax. This ought to be more efficient than the Kyoto caps, since it would encourage the lowest-cost reductions in carbon emissions to happen first. The discounted costs of applying such taxes would amount to $128 trillion up to 2300. The benefits are reckoned to be $271 trillion. That produces a benefit-to-cost ratio of 2.1. Carbon taxes do indeed give better value for money than Kyoto.

The last policy recognizes that predictions of climate change encompass a wide range of scenarios. Mr. Cline looks at the costs and benefits of abating global warming in 95% of possible outcomes, rather than focusing only on the median prediction for climate change. This strategy is even more aggressive than the other two, as it addresses worst-casc scenarios. 'Reducing emissions by enough to mitigate damage in 95% of scenarios would be extraordinarily expensive - a cost of 3.5% of world economic output for the rest of the 21st century, rising to 5% later: $458 trillion in net-present-value terms. But the gains, if measured against the worst-case scenarios, are big too: some $1,749 trillion. The benefit-to-cost ratio would be 3.8.

All of these figures are huge and, given the time horizon, very speculative. Mr. Cline emphasises that much depends on how you discount costs and benefits for future generations. Even on his analysis, with many assumptions very favourable to

aggressive abatement strategies, the economic benefits of reducing global warming are not felt in any of the three policy regimes until around 2100- and the costs are felt immediately. Policies to deal with global warming do not produce the short-term gains of many other development policies.

I. *Speak about:*

(a) the biggest threats facing the planet;

(b) the possible damage costs;

(c) three possible remedies.

II. *Put the given words into the order to get positive sentences and translate them:*

1. ecology, effects, of, studies, the population, and, the community, evaluates,, the responses, and, communities, cause, of, populations, to, change, environmental.
2. interdependent, the science, or, defines, of, groups, organisms, of, collections, ecology, "ecosystem", as.
3. principles, the inclusion, in, a, major, of, ecological, engineering, is, component, principles, decisions, environmental, profession, the, engineering.

III. *Put each of the following words or phrases in its correct place below and translate into Ukrainian.*

sewage	enlightened	pesticides	sustainable
organic	acid rain	ecological	deforestation
disposal	herbicides	extinction	animal rights

When industrialisation began, little thought was given to its (a) _____ effects. Raw, untreated (b) _____ was allowed to pollute our seas and rivers. Animals were

killed for profit to the point of (c) _____. The loss of trees through uncontrolled (d) _____ caused erosion and unstable climate, (e) _____ was caused by the poisonous gases man sent into the atmosphere. Chemicals in (f) _____ killed animal life, (g) _____ destroyed plants. The balance of nature was disturbed. It is only now that we are waking up to the problem. More natural, (h) _____ farming is advocated. Legislation controls the (i) _____ of waste products into our air and water. Wildlife organisations are becoming more militant in their fight for (j) _____. Replanting policies in some parts of the world mean that our forests should in future be (k) _____.

We can only hope that growing public awareness and (1) _____ legislation will produce a world, which is safe for us and will provide a good quality of life for future generations.

IV. Read the sentences and write as many questions as possible.
Discuss the problem.

1. The main cause of global warming is increased level of carbon dioxide and other greenhouse gases released into the atmosphere.
2. Greenhouse gases are stored into higher atmosphere levels where they have double effect on Earth's temperature surface.
3. The biggest cause of global warming is using fossil fuels (mostly coal and oil).
4. Another cause of global warming is destruction of forests, particularly rainforests.
5. Some of the possible global warming consequences are: rising of sea level because of glaciers melting, frequent extreme weather events increase in the severity of extreme weather event.

V. On a Bus

Bus conductors still collect passengers' fares in some towns, but single-deck one-man buses are seen more and more, especially in country districts. In London, fast buses called 'Red Arrows' run non-stop between important places. The fare is fixed, and passengers pass through an automatic gate, which opens when the correct coins are inserted.

(i)

A Does this bus go to the station?
B No, you'll have to get off at the bank, and take a 192.[1]
A Can you tell me where to get off?
B It's the next stop but one.[2]

(ii)

Am I OK for St Mary's Church?
No, we only go as far as the park, but you can walk from there.
How much further is it?
It's quite a way yet, but I'll tell you in good time.

(iii)

Do you go to the sea-front?
No, you're going the wrong way. You want a 143 from the church.
Have we got much further to go?
It's the next stop.

(iv)

Is this the right bus for the Town Hall?
No, you should have caught a 12. Jump out at the bridge and get one there.
Could you tell me when we get there?
It's three stops after this one.

[1] bus numbers such as 15 and 93 arc pronounced as 'fifteen' and 'ninety-three'. Larger numbers such as 143 are pronounced as 'one-four-three'

[2] the next stop but one: two stops from here

Example I

Would you tell me where I get off for St Mary's Church, please?

1) …… Terminus Road, ……..?

2) …… out……..?

3) Could……..?

4) ……. the right stop ……. …….?

5) …… Princes Park ...…?

Example II

STUDENT A Does the **19** go to **Terminus Road**?

STUDENT B Terminus Road? No, it only goes as far as the church! You want a **91**!

1 A…….. 21…….the post office?
B.....the river……..12.

2 A ……..152……..the clock tower?
B ……..Duke Street…….251.

3 A …… 14 ……. Scampton?
B ……. Waddington …… 41.

4 A ……. 68 …….the university?
B ……... the Odeon ……. 86.

5 A ……... 72**.....** the technical college?
B ……... the castle …….. 27.

Respond to A's statements using the phrase 'shouldn't have' plus the past participle.

Example III

STUDENT A I took the 61!

STUDENT B You **shouldn't have taken the 61!** That was a mistake.

1 A. I got out at the park.
B. …….

2 A. I caught a Red Arrow.
B. ……

3 A. I came early.
B. …….

4 A. I asked for the station.
B. …….

5 A I bought a return ticket.
B. ……..

Respond to A's statements using the phrase 'should have" plus the past participle.

Example

STUDENT A I didn't go by bus!

STUDENT B That was wrong. You 'should have gone by bus!

1	A	I didn't remember the number,
	B	……..
2	A	I didn't bring my season ticket.
	B	…….
3	A	I didn't ring the bell.
	B	……
4	A	I didn't have any change.
	B	……
5	A	I didn't get a return.
	B	……

VI. Air Travel

At the airport

1. Put each of the following words or phrases in its correct place in the passage below.

departure lounge	immigration officer	check	runway
departure gate	security guard	board	on board
departures board	excess baggage	check in	duty free
hand luggage	conveyor belt	taxi	passengers
announcement	check-in desk	trolley	take off
security check			

When you travel by air you have to get to the airport early in order to (a) _____ about an hour before your flight. If you have a lot of luggage, you can put it in a (b) _____ and push it to the (c) _____where someone will (d) _____ your ticket and weigh your luggage. If you have (e) _____, it can be expensive. Your heavy luggage is put on a (f) _____ and carried away. A light bag is classed as (g) _____and you can take it with you on to the plane An (h) _____ look at your

passport and a (i) _____ checks your hand luggage before you go into the (j) _____ to wait till your flight is called. If you want to, you can buy some cheap (k) _____ goods here. Then you see on the (I) _____ or you hear an (m) _____ that you must (n) _____ your plane. You go through the (o) _____, then there is sometimes a (p) _____ before you actually enter the plane. When all the (q) _____ are (r) _____, and when the captain and his crew are ready in the cockpit, the plane begins to (s) _____ to the end of the (t) _____ . Finally, permission is receive from the control tower and the plane moves faster and faster in order to (u) _____ .

VII. In the air

Instructions as above.

headphones	seat belts	aisle	land
turbulence	cabin crew	airliner	

Flying is fun. I like being in a big (a) _____ with the (b) _____ (stewards and stewardesses) looking after me. They walk up and down the (c)_____ bringing meals and drinks; and if the flight is going through some (d)_____ , they warn everybody that it might be bit bumpy and as' us to fasten our (e) _____ . On a long flight I like listening to music through the (f) _____Available to all passengers, and sometimes I have a sleep. I enjoy it all so much that I never want the plane to (g) _____.

VIII. Put one of the following words in each space in the sentences below.

through at to off in on for by

(a) We decided to go_____ plane.

(b) When do we take _____?

(c) First you must go _____ customs and immigration.

(d) You'd better ask _____ the information desk.

(e) His friend went _____ the airport with him to see him _____

(f) You must check _____ at 10.30.

(g) Put your luggage _____ a trolley.

(h) He looked _____ my passport.

IX. Study and remember the following words and expressions:

an aircraft - an air liner
a jet plane
comfortable=adjusted armchairs
departure
arrival
schedule
check-in
check-in desk
air hostess = stewardess
to arrive

shuttle = coach
attendants
gate
landing
employees = staff
reading lights
boarding pass
objects=items=articles
escalator=elevator
hast call
now boarding

customs; / passport/security control
immigration inspector
custom officer
to buy round trip ticket
to buy one way ticket
to go through customs
to book tickets
to set your luggage
to weight the luggage
boarding card
cabin is fitted out / provided with
to meet international standards
connecting flights
to pick up luggage from
to charge for baggage
to listen
to airport announcement
the flight is delayed
hand luggage=carry on baggage
to present luggage for inspection
to get your luggage
to fasten=tighten the seat belt
to release the seat belt

X. *Here are some helpful things to know about American airports.*

Timetable services
Administration offices
Information center
Booking/ Ticket office
Hallway = Lobby free
Enquiry office

Lost and found
Currency exchange
newsstands
nursery
coffee shop
duty free

arrival hall
departure lounge
Operating area
VIP area
waiting room
Baggage reclaim
Green channel
markers
hotel for sort-time stay
recreation area
traveling on flight
security guard
Restroom=toilet

LESSON 7

Natural Wonders of the World

Read the text. Discuss given information. Make a list of the most important points from the text.

Victoria Falls

There are few appropriate superlatives that have not already been applied to this magnificent natural wonder of the world; in many ways it defies description. So vast are the falls and their setting that it is difficult to grasp their true grandeur and for thi reason, they are perhaps best seen from the air.

The Victoria Falls offer an inescapable closeness to the natural elements. The towering column of spray when the river is high, the thunder of the falling water, the terrifying abyss that separates Zimbabwe from Zambia, the forest - lined, placid, tranquil lagoons upstream in which hippo and deadly crocodiles lurk.

David Livingstone reported the existence of the Falls to the outside world in 1860. The result was immediate and from that point, the number of foreign visitors rose steadily. People walked, rode on horseback or traveled by ox - wagon from the Transvaal along what was then called the Hunters Road (now the border between Botswana and Zimbabwe) and on reaching George Westbeech's store at Pandamatenga left their animals there, safe from the lethal bite of the tsetse fly, and walked the remaining 80 kilometers, due north to the Falls.

With the conflict in South Africa finally resolved and the region politically more stable, tourism i developing rapidly. New activities are constantly emerging and the

industry is becoming more and more sophisticated. Rafting the wild rapids below the Falls was the first innovation more than ten years ago.

Now the list of organized, commercial activities has expanded dramatically. Visitors can kayak, canoe, fish go on guided walking safaris, ride on horseback, lunch on Livingstone's Island and in addition to the well-know "Flight of Angels", for the more adventurous there is micro lighting with stunning views of the Falls.

The Grand Canyon

The Grand Canyon of the Colorado River is the largest gorge in the world-a 290-mile-long gash across the face of the Colorado Plateau in northern Arizona. Rim to rim, it measures up to 18 miles across, with an average width of 10 miles; its average depth is one mile. Within this Delaware-size area of eroded rock rise mountains higher than any in the eastern United States and that dark walls of gorges millions of years old. Agent of this scene, the Colorado River drops 2,200 feet over nearly 200 rapids as it roars through the Canyon toward the Gulf of California.

Numbers, though, tell only part of the canyon's story and merely hint at the magic of its myriad hues, strata, spires and gorges. The place is more than the sum of its parts-so much more that neither the eye nor the mind of the beholder can encompass more than a small part of it at one time. As John Wesley Powell, whose party in 1869 became the first to traverse the canyon by river, wrote, "You cannot see the Grand Canyon in one view, as if it were a changeless spectacle from which a curtain might be lifted. »

At the canyon's bottom, a mile below the rim, the Colorado River slices through Granite. Gorge, exposing some of the oldest rocks visible anywhere on the earth. Nearly two billion years old, the Vishnu schist is the gleaming black remnant of a once towering mountain range. Some 500 million years after it formed, vast rifting and faulting laid it down the tilted, colorful sediments of the Grand Canyon Series atop schist. Ten distinct layers of sandstone, limestone, and shale bespeak the

advance and retreat of ancient seas, the building up and wearing down of mountains, the meandering of rivers over 600 million years.

Practical work

I. Put the given words into the order to get positive sentences and translate them

1. water, the subject, in, the public, all, quality, developed, of, the state, countries, is, special, the media, and, the subject, attention, of.
2. quite, task, assessment, of, quality, time-consuming, water, is.
3. Water, the European Union, compassion, quality, Ukraine, of, the standards, quite, of, and, national, are, norms, interesting.
4. Quality, one, in, regulations, the, of same, water, various, significantly, from, differ, each, other.
5. Control, major, of, plays, role, in, drinking, the, grade, water, maximum pollution levels.

Speak about "Environmental aspects of the quality of natural waters" paying attention to the quality of drinking water in Ukraine.

*II. In each sentences below decide which word in **bold** is more suitable.*

1. During the 1970's and 1980's, it became increasingly **evident** / **visible** that companies in the West were uncompetitive.
2. The United Kingdom **makes** / **publishes** more books than any other country.
3. There has been a major road accident, **involving** / **including** 23 cars and 16 lorries.
4. On the basis of the latest survey, we know that most people have a very **negative** / **bleak** view of politicians and their parties.

5. In many parts of the world, people are becoming more worried about the danger of pollution and its effect on the **environment** / **ecology.**
6. Education experts from France travelled to Japan to **evaluate / judge** the secondary school system there.
7. Although it is not very big, the library has an excellent **range** / **variety** of books, journals and other resources for study.
8. Increasingly, the design of buildings is being **adjusted** / **modified** to allow easier access for disabled people.
9. The lack of extra student accommodation **restricted** / **narrowed** the expansion in student numbers which the university was planning.
10. Many students **acquire** / **derive** a great deal of enjoyment and satisfaction from their time at university.
11. Although the world is getting warmer slowly, the increase in temperature **varies** / **fluctuates** from country to country.
12. Following the bank raid, the police **followed** / **pursued** the robbers but were unable to catch them.
13. Assessment on this course **includes** / **consists of** coursework (30%) and examinations (70%).

III. Choose the word with a similar meaning as the underlined word:

1. Do you have a pen and paper **close by**?
   a. at hand b. complex c. on time d. polite
2. He **practised** saying a few phrases in Chinese.
   a. anticipated b. rehearsed c. represented d. wasted
3. I was surprised when she **got angry** during our conversation.
   a. lost control b. referred to c. stood up d. prepared to
4. Please tell her it is **necessary** that she call me back this afternoon.
   a. agreeable b. clear c. essential d. polite
5. We thought we could **depend on** your office to take care of this problem.

a. refer b. rely on c. stand up d. waste time

IV. Complete the interview questions with the words below.

achievement, approach, get, good, know, learn, like, look for, motivates, offer, plan, sort, strengths, weakness, work.

1. Tell me about yourself.
2. Why should we _____ you the job?
3. What is your major _____?
4. What are you _____ at?
5. What ____ of person are you?
6. What are your _____ and _____?
7. What do you _____ about our organization?
8. How would you _____ this job?
9. How do you _____ things done?
10. What do you _____ in a manager?
11. What _____ you?
12. Do you like to _____ in a team or on your own?
13. What do you _____ best about your current job?
14. What did you _____ in your last job?
15. How long would you _____ to stay with this company?

V. Complete the sentences below with one of the following verbs plus a preposition. Remember to use the correct form of the verb.

apologize arrive belong complain correspond die distinguish experiment fill knock lose pray rhyme suffer vote

1. Did you hear about Tom and Sally? They've decided to emigrate to New Zealand.
2. It was almost midnight when we _____ the station.
3. Do you know who this book _____?
4. I taking so long to reply to your letter.
5. Could you _____ this form, please?
6. If you don't agree with the proposal, you can always ___it at the meeting.
7. Some people find it difficult to _____an American accent and a Canadian accent.
8. He _____ the manager about the poor service at the restaurant.
9. Would you say that the British House of Lords _____ the American Senate?
10. I think there's someone _____ the door.
11. Can you think of a word that _____ 'sing'? Yes, 'bring'.
12. Do you think scientists should be allowed to _____ animals?
13. The priest said he would _____ us.
14. For years, her husband had _____ migraines.
15. I don't know why, but I really hate _____ cards. It puts me in a bad mood all day.
16. Although he had survived the battle, the soldier later _____.

VI. Put the adjectives in the correct places and in the right order in the following sentences.

There is an example at the beginning (0).

O She bought a handbag in the sale, (leather, brown)

She brought a brown leather handbae in the sale.

1. He bought a bunch of roses, (yellow, sweet-smelling)
2. The next-door neighbor's cat has soft fur. (grey, lovely)
3. The hotel was owned by a businessman, (tall, German, middle-aged)

4. They lived in a house, (three-bedroomed, semi-detached, brand new)
5. My brother loves sports cars, (red, Italian, fast)
6. In the middle of the room was a coffee table, (oval, superb, oak)
7. Where did you get this vase from? (old, magnificent, Japanese)
8. I love meals, (tasty, hot, Indian)
9. He was wearing a jacket, (shabby, cream, old, linen)
10. Outside the Town Hall was a statue, (marble, huge, triangular, black)

VII. Put the adverbs in the best places in the following sentences. There is an example at the beginning

We have a lie-in on Sunday morning. (usually)

We usually have a lie-in on Sunday morning.

1. The children go riding on Saturdays, (sometimes)
2. I was pretending. I wouldn't have chopped your finger off! (only, really)
3. Carol's daughter plays the violin, (beautifully)
4. My brother finishes work on Fridays, (nearly always, early)
5. I don't go to the theatre. My sister, on the other hand, goes, (often, regularly)
6. I don't understand why Joanna didn't want to come to my party, (still)
7. George hasn't done much work so he'll fail the exam, (probably)
8. I disagree with you! Watching football live is better than watching it on TV. (completely, definitely)
9. Where's Rose?' 'She's gone home.' (just)
10. 'Is my omelette ready?' (yet) 'No, dear, I'm waiting for the hen to lay the eggs!' (still)

VIII. Asking about Health

When an Englishman asks you about your health, he is probably only doing so out of politeness Unless he knows you have been ill, he is certainly not expecting a detailed medical report, and will be most surprised if you give him one.

(i)

A How's your father keeping?

B He's been off work for a day or two.

A What's wrong with him?

B He's gone down with a cold.

A Tell him I hope he soon feels better.

B That's very kind of you. I'll pass it on.

(h)

Where's Tony this evening?

He’s not feeling very well.

Really ? What's the trouble?

I think he must have eaten something.

Give him my regards and tell him to take things easy.

Thank you very much. I'll tell him what you said.

(iii)

How's your brother these days?

He hasn't been too well just recently.

I'm sorry to hear that.

What's the matter?

I think he's been overworking.

I hope he soon gets over it.

Thank you. He'll be pleased to hear you asked after him.

(iv)

I haven't seen Bob lately.

How is he?

As a matter of fact, he's laid up.[1] Oh dear! What's up with him?

We don't know, but we're having the doctor in tomorrow.

Let me know if there's anything I can do.

Thanks very much. I'll tell him you inquired about him.

Example I

Give Tony my best wishes and tell him not to overdo things.

1) ……..regards ……..

2) …… overwork.

3) ……..to get well soon.

4) ……..to take things easy.

5) **.....** Roger ……..

Example II

STUDENT A Peter's not feeling very well.

STUDENT B I'm sorry to hear that. Tell **him** I hope **he** soon feels better.

1	A	Brenda……..
	B	…….
2	A	The children……
	B	……
3	A	Henry……..
	B	……
4	A	The girls…….
	B	……..
5	A	Olive……
	B	…….

Example III

STUDENT A 1 haven't seen **Bob** for some time. How is **he?**

STUDENT B As a matter of fact, **he** hasn't been too well just lately.

1 A ……..your sister…….?

B …….

2 A ……..Professor White……?

B …….

3 A ……..Tom…… ?

B ……

4 A ……..you……..?

B …….

5 A ……..the Robinsons.....?

B ……

Example IV

STUDENT A Are you sure he knew?

STUDENT B Yes, he 'must have known.

1 A ……...she ate it?

B …….

2 A ……..they took it?

B ……

3 A ……..you did it?

B ……

4 A ……..he understood?

B ……

5 A ……..she broke it?

B ……

IX. The Weather

Foreigners are often amused that the English spend so much time discussing the weather. The reason for this is not simply that our weather is interesting and variable, but that the English are reluctant to converse about personal matters with people who are not friends. Mentioning the weather can be a useful and inoffensive way of starting a conversation with a stranger at a bus stop or in a train.

(i)

A Fairly mild for the time of year.

B Yes. Quite different from the forecast.

A They say we're in for snow.

B Let's hope it keeps fine for the weekend.

(ii)

It seems to be clearing up.

It makes a change, doesn't it?

Apparently it's going to turn colder.

Still, another month should see us through the worst of it.

(iii)

Nice and bright this morning.

Yes. Much better than yesterday.

The wind'll probably get up later.

As long as it doesn't rain.

(iv)

It's good to see the sun again.

A big improvement on what we've been having.

It's supposed to cloud over this afternoon.

I didn't think it would last.

They: the forecasters

we're in for snow: snow is expected

see us through the worst of it: find us through the worst of the winter and into spring

as long as it doesn't rain: I don't mind what happens provided it doesn't rain

Example I

Apparently it's going to turn colder and freeze later on.

1) ……..drizzle…….
2) They say ……
3) …….. warmer……
4) ……..get ……
5) …….. rain …...

Example II

STUDENT A They say we're in for **snow.**

STUDENT B As long as it doesn't **rain.**

1	A	…... fog.
	B	……..freeze.
2	A	……..drizzle.
	B	…….. snow
3	A	…… high winds.
	B	……. last.
4	A	…….thunder.
	B	…….spoil the weekend.
5	A	……..showers.
	B	…….. interrupt the cricket.

Example III

STUDENT A Cold this morning, isn't it?

STUDENT B Yes. Apparently it's going to get even **colder.**

1	A	Hot……?
	B	……
2	A	Warm……?
	B	……
3	A	Cool ……?
	B	…….
4	A	Wet ……..?
	B	……
5	A	Foggy ……...?
	B	……

Example IV

STUDENT A I think **the wind's getting stronger**.

STUDENT B Yes, they said **it would get stronger** later on.

1 A …….. the weather's turned colder,
B ……
2 A ……it's coming over cloudy.
B ……
3 A ……the fog's got thicker.
B ……
4 A ….……...it's turned milder.
B ……..
5 A ……it's got warmer.
B ……..

X. Complimenting People on Clothes

It is better not to ask the price of someone's clothes unless you know the person very well.

(i)

A What a nice cardigan!

B Does it look all right?

A Yes, and it matches your scarf perfectly.

B I got it for £28.50 in a sale. A It's incredible.

a sale: when goods are sold cheaply in the shops - often in spring and autumn

(ii)

I 'say, I like your new raincoat.

Is it a good fit?

Yes, it looks fabulous.

It only cost me £29.

Well, that was very good value.

(iii)

You're looking very smart in that new jacket.

Does it suit me?

Yes, and I like the colour, too.

You know I only paid £27.75 fork.

You got a bargain there.

(iv)

That's a very nice blazer you're wearing.

Do you really like it?

Yes, and it goes well with your new pullover, too.

You'll never believe it, but it only cost £29.50.

Very reasonable indeed.

Example I

I 'say, those're very nice-looking gloves you've got on.

1) ……..smart ……..
2) …….. shoes ……..
3) …….. ……. you're wearing.
4) ……. that's a ……. jacket ……..
5) ……..elegant …….

Example II

Your umbrella matches your raincoat marvelously.

1 ... jumper ... trousers beautifully.

2 ... gloves ... handbag perfectly.

3 ... slacks ... cardigan fabulously.

4 ... belt... scarf superbly.

5 ... socks ... sandals exactly.

Example III

STUDENT A What do you think of my new **raincoat?**

STUDENT **B** It looks **fabulous.**

1 A ……suit?
B …….....very smart.

2 A …….....tie?
B …… great.
3 A ……shoes?
B ……. very nice.
4 A ……..jacket?
B ……marvelous.
5 A ……skirt?
B ……gorgeous.

Example IV

STUDENT A Do you think this **blouse** really suits me?
STUDENT B Of course **it does. It goes** well with your **scarf,** too.

1 A ……. pullover….. ?
B ……. trousers ……
2 A ……..false eye-lashes…….?
B ……..hair-style……
3 A ……shirt…….. ?
B ……..tie.....
4 A ……..stockings…...?
B ……..shoes ……
5 A …….hat……?
B ……..handbag……

Example V

STUDENT A Don’t you think that's a good **match?**

STUDENT B Yes, it's 'jolly **good.**

1 A …….a reasonable price?
B …….
2 A …….a nice colour?
B …….
3 A …….a smart coat?
B …….
4 A …….a good fit?
B ……..
5 A …….a clever design?
B …….

LESSON 8

I. Read and translate the text. Briefly summarize the content of the text, basically state the topic and main idea.

Decision-making on the solution of ecological problems.

Decision-making on the near and long-term goals of socio-economic development is based, on the one hand, on the knowledge of the needs of society and their development and, on the other hand, on the knowledge of the limiting factors. On the general plane, it is possible to speak about the target behavior c a system in a certain environment and adaptation of behavior to changed conditions. The energo-material and information ties of the system and its environment influence and impose limits upon its behavior. Consequently, it is necessary to obtain information about the limits as well as about the necessary adaptation mechanisms. From the viewpoint of socio-economic development, these include, on the one hand, the barriers of natural conditions whose laws must be learned so as to prevent their damage, and, on the other hand, the acquisition of new technical solutions for optimizing the relation of needs and techniques for their satisfaction within the framework of a comprehensively conceived anthropo-ecological system. The basis therefore is the process of cognition of the natural and social laws and their integration in trajectory variants as the basis for the social decision-making process with a view to determining long-term goals and the stages of their gradual attainment.

Inter-disciplinary anthropo-ecological documents for political decision-making One of the serious problems of the decision-making process in the solution of ecological problems is the quantity and diversity of the relevant data, their excessive specialization and thus the limited utility for decision-making. For a long time, many scientists have already agreed that the study and solution of environment problems was no longer exclusively the affair of one scientific discipline but that they were essentially the subject of an inter-disciplinary approach. Practically all branches of natural and social sciences intervene in their solution.

This is certainly a generally acceptable view, but in its implementation, one meets with complicated obstacles. Not only for the problem of the specialized terminology of the different scientific disciplines where the same terms sometimes have totally different content, but mainly for the different methods of research, experiment, assessment and interpretation of the results. Even the results of the study of one object, e.g. water reservoir, will be completely different according to the

points of view of each scientific discipline. It is most possible that the decision-makers would obtain from the specialists proposals for different, if not contradictory measures, and sometimes mutually exclusive solutions (e.g. such as recreational use of drinking water reservoir).

Here we come to the important task for science in social practice and, at the same time, to the methodological problems arising in the preparation of such an inter-disciplinary document. It is not only matter of a 'different language' of different scientific methods in individual disciplines, but it sometimes concerns the debate on the fundamental issues of the scientific work. When has an exact' scientist the right or the duty to come out of the shell of his narrow and countless verified laboratory experiment to take up an attitude to an issue which is only vaguely related to his subject, and therefore only lends itself to a remote analogy? And yet who has the right to derive such an analogy, if not the specialist of the respective field?

Consequently, conflicts occur among specialists of the natural and social sciences, where each is trying to impose the priorities of his viewpoint as the 'nation-wide' interest. Another problem of such an interdisciplinary cooperation is the discussion between the analytics and synthetics in each individual scientific discipline of both groups. In social sciences as well there are experts, specialized in some partial problems, who study the most minute details and, on the other hand, there are also natural scientists with a broad ecological orientation and an insight into several scientific disciplines. The analytists reproach these 'encyclopedists' for 'knowing nothing about everything,[1] while the synthetists laugh at the narrow specialists for 'knowing everything about nothing.' The discussion goes as far as the issue of 'science an non-science,' where only exact experimental work is considered as scientific, while its processing as a basis for decision-making is considered as non-scientific compilation.

In our opinion, this discussion is totally pointless. Evidently, science can only progress through analytic; and experimental work in search for fundamental knowledge and laws. Different scientific disciplines have their different methods of analysis, their experiments and their laboratories. Such methods traditionally exist in the natural sciences but they are being continuously expanded by more exact and accurate equipment. The experiment takes place in exactly defined conditions and must be reproducible be conclusive.

In the social sciences, the experiment, if it is at all feasible, cannot be repeated because a socio-economic process cannot be confined in a laboratory. Very often, in the time between the start of the experiment and its assessment, changes take place which affect the results or the views of the respondents even in the most careful selection, can only partially reflect the authentic opinions of a broader population.

In preparing data for decision-making concerning the environment, we have to realize that the relations between social and economic development and the

environment are influenced not only by natural but also by socio-economic processes.

II. *Put 10 questions to the text.*

III. *Hold a discussion in the group to broach the topic "Political Decisions on Ecological Problems"*

Practical Work

I. Put the adjectives in the correct places and in the right order in the following sentences. Translate into Ukrainian:

Example: She bought a handbag in the sale, (leather, brown)

- *She bought a brown leather handbag in the sale.*

1. He bought a bunch of roses, *(yellow, sweet-smelling)*
2. The next door neighbor's cat has soft fur. *(grey, lovely)*
3. The hotel was owned by a businessman, *(tall, German, middle-aged)*
4. They lived in a house. (*three-bedroomed, semi-detached, brand new)*
5. My brother loves sports cars, *(red, Italian, fast)*
6. In the middle of the room there was a coffee table, *(oval, superb, oak)*
7. Where did you get this vase from? *(old, magnificent, Japanese)*
8. I love meals *(tasty, hot, Indian)*
9. He was wearing a jacket, *(shabby, cream, old, linen)*
10. Outside the Town Hall was a statue, *(marble, huge, triangular, black)*

II. Put the adverbs in the best places in the following sentences. Translate into Ukrainian:

Example: *We have a lie-in on Sunday morning (usually)*

- *We usually have a lie-in on Sunday morning.*

1. The children go riding on Saturdays. *(sometimes)*
2. I was pretending I wouldn't have chopped your finger off! *(only, really)*
3. Carol's daughter plays the violin. *(beautifully)*

4. My brother finishes work on Fridays. *(nearly always, early)*
5. I don't go to the theatre. My sister, on the other hand, goes. *(often, regularly)*
6. I don't understand why Joanna didn't want to come to my party. *(still)*
7. George hasn't done much work so he'll fail the exam. *(probably)*
8. I disagree with you ! Watching football live is better than watching it on TV. *(completely, definitely)*
9. "Where's Rose ?" - "She's gone home." *(just)*
10. "Is my omelette ready ?" *(yet)* - "No, dear. I'm waiting for the hen to lay the eggs!" *(still)*

III. Complete the sentences below with one of the following verbs plus a preposition. Remember to use the correct form of the verb. Translate into Ukrainian:

account, accuse, book, count, deal, grumble, insist, surround, specialize, taste

Example: *The hotel's fire regulations have been <u>translated into</u> eighteen languages.*

1. As it was getting late, we decided to_____the nearest hotel.
2. "My coffee_____ garlic !" - "You're lucky, mine has no taste at all".
3. I was_____ cheating in the examination, just because I had made a few notes on the back of my hand.
4. If there are personnel problems in the factory, the boss always asks her deputy to_____ them.
5. The English_____ the weather, but secretly, they don't mind their climate because they love complaining.
6. "Why am I_____ idiots ?" - "We don't know, Dad."
7. The teacher_____ calling me "Ghengis" even though my real name is "Attila".
8. Michael trained as a psychiatrist and he now_____ mental disorders of the rich.
9. Sylvia is always ready to help people. You can_____ her to help out in a crisis.
10. Scientists are unable to_____ the hole in the ozone layer, although some people believe that aerosols are to blame.
11. "Passengers are kindly requested to_____ smoking." (airline announcement)

IV. Marcia Garcia tells us about her educational background. Complete each sentence with one of the words or phrases given bellow. You will need to put the verbs into the right tense (You can then make similar sentences about your own education & qualifications - academic & professional).

apply, degree, graduate (verb), grant, higher degree, job, option, PhD, primary school, thesis, secondary school, stay on, study, subject

1. I started at primary school in London when I was five.
2. At the age of 11, I went on to _____ , also in London.
3. At 17, I _____ to University.
4. I got a _____ at Manchester to _____engineering.
5. But at the end of the first year I changed to another _____.
6. I _____from University in 1997.
7. I have a first-class _____ in Economics.
8. I decided to _____ at university.
9. So I did a _____ in Business Administration at the University of California.
10. During the course, I did an _____ on small business development.
11. I found the topic so interesting that I applied for a _____ to do a doctorate on the same subject.
12. Once I had got the money, I had to write a 5, 000-word _____.
13. So now I have a BA, an MBA and a _____.
14. All I need now is a _____!

V. Fill in the blanks to describe the type of the problem:

communication, financial, technical, time, manpower

1. A minor _____ problem in the product was a result of bad manufacturing.
2. Our _____ problem was caused by a storm knocking down telephone lines.
3. Several delays in starting led to insufficient _____to complete the project.
4. The company's _____ problems are due to bad investments by the GEO.
5. The factory's _____ problem resulted from the number of employees who quit after the factory was sold to a new corporation.

VI. Bank Accounts

Opening an account

1. Put each word or phrase in the group below in its correct place in the following passage.

formalities	**open**	**account**	**bank charges**
overdraft	**branch**	**fill in**	

It's very simple to (a)_____a bank (b)_____ in Britain. There are very few (c) _____. Just go to your local (d) _____ , (e) _____ a few forms, and that's it. You will probably only have to pay (f) _____ if there is no money in your account or if you borrow money from the bank, in other words if you have an (g) _____ .

Current and deposit accounts

2. Instructions as above.

notice	**current**	**cheque**	**withdraw**	**deposit**	**interest**

For regular everyday use most people prefer a (a) _____ account. This normally earns no (b) _____but you are given a (c) _____ book, which makes shopping and paying bills very easy. A (d) _____account earns interest but it's not so easy to (e) _____your money. You sometimes have to give a week's (f)_____ .

Using your account

3. Instructions as above.

balance	**deposit**	**withdrawal**	**standing order**		**statement**

At regular intervals, perhaps monthly, you will receive a (a) _____from the bank, giving details of each (b) _____(money you put in) and (c) _____ (money you take out). If you're not sure how much money you have in your account, you can just go to your bank and ask what your (d) _____ is. If you have to make a regular payment, like rent, you can ask the bank to pay this amount for you automatically. This arrangement is called a (e) _____ .

Spending

4. Instructions as above.

expenditure	**counterfoil**	**income**	**keep a record**
crossed	**overdrawn**	**cash**	

Some people spend more money than they receive. In other words, their (a) _____ is greater than their (b) _____ . If you take more money out of the bank than you have in your account, you are (c) _____ . To (d) _____ of your spending, it's a good idea when you write a cheque to fill in the (e) _____ , which stays in the book. Most cheques are (f) _____ cheques, which means that no one else can (g) _____ them. They must be paid into someone's account.

5. Put one of the following words or phrases in each space in the sentences,
out of **from** **for** **at** **in** **to**

(a) He borrowed £10 _____ his father.
(b) She filled _____ the cheque.
(c) I asked _____ my balance.
(d) I prefer a current account _____ a deposit account.
(e) You'll get a statement _____ regular intervals.
(f) He took £100 _____ his bank.
(g) He withdrew £100 _____ his bank.

VII. Hiring a Car

Foreign visitors may use their foreign licenses for a period of one year before they have to take the British driving test. An international license is not normally necessary.

(i)
A How much is it to rent a large estate car?
B £24 a day or £135 a week.
A Will I be able to have one next weekend?
B Have you got a current[1] license?
A Yes, I've been driving since I was eighteen.
B Good. All you do now is complete this form.

(ii)
What's the rate for one of your medium-sized vans?

The daily rate is £23, and the weekly £128.
Right then. I'd like to book one for next Friday, please.
Is yours a full license?
Yes, I've had one ever since 1978.
OK. If you'll just fill up this form, I'll book you one.

(iii)
Can you tell me the hire charge for minibuses please?
You can have one for £20 a day, or £138 for a week.
All right. I'll take one for the week starting Tuesday next.
Is your driving license valid?[1] Yes, there's no problem there.
Fine. We'll need some particulars and a £25 deposit.

(iv)
Suppose I wanted to hire a van - how much would it cost?
£22 per day, £130 per week.
Fair enough.[1] Reserve me one from the 1st to the 10th, please.
Have you held a license for over two years?
Yes, here it is.
Right. In that case there's only a form to fill in.

[1]*a current licence:* an up-to-date licence
[1]*a valid licence:* an up-to-date licence
[1]*fair enough:* that's all right

Example I

Can you hire me an estate car for three days from tomorrow?
1) ……a small saloon…… ?
2) …….rent…….. ?
3) ……..six……... ?
4) ……..next Monday?
5) ……a large van…… ?

Example II

STUDENT A I'd like to rent **an estate** next **Monday**.
STUDENT B The best I can do is **a saloon**. All the estates are out till **Wednesday**.
1 A…...a pick-up….Saturday.
B…... a van…….Monday.

2 A…...a minibus……Tuesday.
B…... a saloon…...Friday.
3 A…...a camper van…….Thursday.
B…... a trailer tent…….Sunday.
4 A…...an automatic……. Wednesday.
B…... a manual…….Saturday.
5 A…...a trailer…... Sunday.
B…... a roof rack…….Monday.

Example III

STUDENT A What's the **daily** rate for a **Mercedes**?
STUDENT B Rather expensive, I'm afraid. You're talking about[1] £100 a day.

1 A……..weekly……Range Rover?
B……...Quite expensive…….. £800……
2 A……...hourly……..chauffeured Rolls?
B Very expensive……..£40……..
3 A……monthly……BMW?
B Quite a bit, ….....£1000
4 A……daily…….volvo Estate?
B Not cheap, ……£60…..

You're talking about £100: the approximate cost is £100

VIII. Food

1. Put each of the following colloquial words or phrases in its correct place in the sentences below.

the salt of the earth	**cup of tea**	**peanuts**	**no picnic**
a butter-fingers a	**vegetable**	**the cream**	**nuts**
a piece of cake	**full of beans**	**in a jam**	**sour grapes**

a) Throw it to me! Oh, I've dropped it! I am _____ .
b) I said I'd pay him today, but my money's in the bank and it's just closed. Now I'm _____ .
c) You'll have to offer her a high salary for an easy job. An experienced editor like her wouldn't do the job for _____.

d) He never wants to do anything interesting. He just sits around all day. He's a bit of _____ .
e) It'll be cold and wet in the mountains. And we'll have heavy rucksacks to carry. It'll be _____.
f) That firm only employs the very best graduates. They only take _____.
g) I think people who help the old, sick and homeless are _____ .
h) He's a bit tired and lifeless now, but after a nap he'll be _____.
i) She now says she didn't really want the job that she failed to get, but I think it's just _____.
j) That's a crazy idea of hers. She must be _____.
k) She likes literature and classical music. Discotheques are not her _____.
l) The exam was very easy. It was _____.

2. Complete the colloquial similies below with the correct items from the following list.

hot potato	**cucumber**	**hot cakes**
two peas in a pod	**water**	**beetroot**
toast	**sardines**	**pancake**

(a) He never panics in a difficult situation. He stays as cool as a _____ .
(b) She was very embarrassed. She went as red as a _____ .
(c) No, we aren't cold. Your flat's very warm. We're as warm as _____ .
(d) There are no hills or slopes for miles around. It's as flat as a _____ .
(e) They're identical twins, as like as _____ .
(f) As soon as his future employers heard he had a criminal record, they dropped him like a _____ .
(g) That singer's new record is in great demand. It's selling like _____ .
(h) In the rush-hour buses, people are packed like _____.
(i) She's very extravagant. She spends money like _____ .

IX. Things We're Learned About Taste

Read and translate the following statements.

1) Eating more, enjoying it less: Last week, a team of University at Buffalo biologists published a study concluding that obesity can actually change how food tastes. At least that's what they found in mice. They determined that compared to their slimmer peers, severely overweight mice had fewer taste cells that responded to sweetness, and that the cells that die respond did so weakly. Explained lead researcher Kathryn Medler: "What we see is that even at this level-at the first step in the taste pathway-the taste receptor cells themselves are affected by obesity."

2) And no, it can't make everything taste like bacon: It probably was just a matter of time, but scientists in Singapore have developed a digital simulator capable of transmitting the taste of virtual food to the tongue. And that, they say, could make it possible for a person to virtually taste food being prepared on a cooking show or featured in a video game. The researchers sail the taste simulator could also be used to let diabetes patients taste sweetness without eating sweets.

3) Reason #200 that getting old stinks: As we get older, our response to different taste changes, according to research on rats by Japanese scientists. They found that young rats love sugary and meaty flavors in foods, but really hated bitter ones. Older rats had just the opposite reaction-they were less enamored of sweets and umami flavors, but didn't have nearly the aversion to bitter tastes as the young ones.

4) Who eats cheese with a spoon?: Apparently, the utensil you use to consume food can affect how you perceive its flavor. Among the findings of a team of researchers from Oxford University: If yogurt is eaten with a light plastic spoon, people tend to think it tastes denser am more expensive. Or when white yogurt was eaten with a white spoon, it was judged to be sweeter and more expensive than pink yogurt. But if a black spoon was used, the pink yogurt was thought to be sweeter. And one more: When cheese was eaten from a toothpick, spoon, fork am knife, it was rated saltiest when a knife was used.

5) But it's still weird to keep different foods from touching on your plate: If you engage in some kind of ritual before you eat food, you are more likely to enjoy it, concludes a study published in *Psychological Science*. In one of several experiments they performed on the subject researchers from the University of Minnesota found that people who were instructed to firs break a chocolate bar in half, unwrap one half and eat it, then repeat the process with the other half rated the treat higher-and were willing to pay more money for it-than people who were told to eat the chocolate however they wanted.

6) Like, it always tastes better if you say "Arrgh" first: According to a study by a psychologist at the University of Oxford, the environment in which whiskey is imbibed can make a difference in how it tastes. A group of about 500 people who weren't whiskey connoisseurs were asked to taste a single-malt Scotch in three different settings: a room with turf floor, the sound of baa-ing sheep and the smell of fresh-cut grass; another with a sweet fragrance and a high-pitched tinkling sound; and the third with wood paneling, the sound of leaves crunching and the smell of cedar. According to their ratings on scorecards, they found the whiskey in the first room "grassier," the Scotch in the second room "sweeter" and their drinks in the third room "woodier." Although it was all the same Scotch, the study participants said they liked the whiskey they tasted in the "woody" room the most.

7) Beer wins again!: And while we're on the subject, just the taste of alcohol can set off a release of dopamine in the brain. Scientists at the University of Indiana

did brain scans of 49 men who first tasted beer and then Gatorade, and the researchers saw that the dopamine activity was much higher after men tasted the beer. The study also found that the dopamine release was greater among the men with a history of alcoholism in their families.

8) Even then, they didn't hold the mustard: As long as 6,000 years ago, humans were spicing up their food. Researchers found evidence of garlic mustard in the residue left in pottery shards discovered in what is now Denmark and Germany. Because garlic mustard has little nutritional value, the scientists from the University of York believe that it was used to add flavor to meals. The findings run counter to the conventional wisdom that ancient humans were solely focused on eating food to give them strength and endurance.

9) Must not work with fries: Taste sensors in the tongue have evolved so that while animals like salt, they are repulsed when something is too salty. This triggers the same avoidance response as when something is found to be too bitter or sour, according to a study published in the journal *Nature* earlier this year. In fact, said the researchers, mice that had been genetically engineered to be unable to detect bitter or sour tastes couldn't gauge when they were consuming too much salt.

10) That's right, "mutant cockroaches": A strain of mutant cockroaches apparently has evolved to the point where they are now repulsed by the glucose in the sugar traps meant to catch them. A team of scientists in North Carolina tested the theory by giving hungry cockroaches a choice of glucose-rich jelly or peanut butter. And this particular type of cockroach recoiled at the taste of jelly while swarming over the peanut butter. Additional analysis of the pests' taste receptors showed that they now perceive jelly-and therefore sweet flavors-as a bitter taste.

X. Think about the following situations and your rules of etiquette:

a. Table manners in a restaurant.
b. Entertaining in the home
c. Dress for all occasions
d. How to act at a party

LESSON 9

I. Read and translate the text. Briefly summarize the content of the text.

STRATEGY OF NATIONAL ECOLOGICAL POLICY OF UKRAINE UNTI 2020

Ambient air

According to the state statistical reporting of 2009 the main polluters of ambient air are enterprises of processing and extracting industry and enterprises of electricity and thermal power sector (respectively 31 and 21 and 40 percent of total volume of emissions of pollutants emitted into ambient air from fixed sources of pollution). Emissions of pollutants by movable sources are 39 percent of the total amount of emissions of pollutants into ambient air. Emissions of pollutants by automobile transport are 91 percent of pollutants being emitted by movable sources.

The pollutants being emitted mainly into ambient air are nitrogen oxide, carbon oxide, dioxide an other compounds of sulphur, dust.

One can observe an increase of number of cases related to exceeding the established rates of maximal permissible emissions of pollutants by fixed sources. The main reasons causing unsatisfactory condition of quality of ambient air in settlements is non-compliance by enterprises of regime of operation of dust purification equipment, lack of actions for decrease of volume of emissions of pollutants to the established rates, low pace of introduction of the advanced technologies and considerable increase of number of transportation vehicles, in particular, those exceeded their lifetime.

During the last years in industrially developed cities in ambient air the competent authorities have been continuously registering up to 16 polycyclic aromatic hydrocarbons, of those 8 are cancerogenic groups of nitrosubstitutes (nitrozodimetylam and nitrozodietylamin) and heavy metals (chrome, nick cadmium, lead, beryllium). At that in volumes of pollution by chemical cancerogens the compounds (polycyclic aromatic hydrocarbons have the largest specific weight. In total, the cancerogenic risk in 2009 reached 6,4-13,7 of cases of oncological diseases per 1 thousand persons that considerably exceeds international indicators of risk.

Protection of waters

Water in Ukraine is being used mainly inefficiently, non-productive consumption of water increase volume of water resources suitable to be used decreases due to pollution and depletion. Practically all surface water sources and ground waters are polluted. Main substances, which cause pollution, — compounds of nitrogen and phosphorus, organic substances, which are exposed to light oxidation, pesticides, oil products, heavy metals, phenols. Intensive euthrofication of inland water bodies cause worsening of status of Black and Azov seas.

By level of efficient usage of water resources and quality of water Ukraine, according to UNESCO, takes 95-th position among 122 countries.

The system of state governance in the area of protection of waters requires immediate reforming towards transfer to integrated management of water resources. Functions of management in the are of protection, usage and restoration of waters are allocated between different central executive authorities that result in their

overlapping, different interpretation of provisions of environment protection legislation and inefficient usage of budget funds.

Drinkable water supply of Ukraine almost by 80 per cent is ensured by usage of surface waters. Ecological status of surface water bodies and quality of water in such bodies are the main factors of sanitary and epidemiological well-being of population. At the same time most of water bodies by level of pollution are attributed to those, which are polluted and much polluted.

Underground waters of Ukraine in many regions (Autonomous Republic of Crimea, Donbas, Pridnyprovya) by their quality do not meet the regulative requirements to sources of water supply; it is related mainly to anthropogenic pollution. Status of water supply to rural population is of a peculiar concern as the centralized water supply covers only 25 per cent of rural settlements of Ukraine.

Pollution of water with nitrates causes various diseases, decrease of general resistance of organism and as a consequence, results in increase of level of general disease rate, in particular, to infectious and oncological diseases. Non-compliance of drinkable water with the regulative requirements is one the reasons for dissemination of many infectious and non-infectious diseases.

Protection of lands and soils

Status of land resources in Ukraine is close to critical. For the period of land reform a large numb of problems in the area of land relations were not addressed but it became even sharper.

Among the lands of Ukraine the largest territory is occupied by agricultural lands (71 per cent), 78 per cent of which are tilled soil.

On the whole territory there are the processes of degradation of lands, among which the most scaled erosion (about 57,5 per cent of territory), pollution (about 20 per cent), flooding (about 12 per cent of territory). Content of nutrient substances in soils decreases and annual losses of humus are 0,65 tons per 1 hectare.

The problems in the area of protection of lands are largely caused by incompleteness of process of inventory and automatisation of system for maintenance of land cadastre, imperfection of land management documentation and insufficiency of legal and regulatory support, conduct of educational activities, and low institutional capacity of the respective executive authorities.

Protection of forests

By area of forests and reserves of timber Ukraine is a country with a deficit of forest resources.

Forests occupy more than 15,7per cent of the territory of Ukraine (9,58 million of hectares) and are located mainly on the north (Polyssya) and on the west (the Carpathians). Under the European recommendations the optimal indicator of woodiness is 20 per cent; to achieve this it is necessary to plant more than 2 million hectares of new forests. The total areas of lands covered with forests increased since 1961 from 7,1up to 9,5million hectares (by 33,8 per cent).

If the abovementioned pace of afforestation are kept then only in 20 years Ukraine will achieve an optimal level of woodiness.

The forests of the State Forestry Committee, which are attributed to nature and reserve fund, occupy about 1,2 million hectares or 35 per cent of nature and reserve fund of Ukraine. The share of preserved forests, which are under competence of the State Forestry Committee, is 15,4per cent.

The powers for protection and restoration of forests are entrusted to central and local executive authorities that results in duplication of their work and inefficient usage of budget funds. The system of management in the area of protection and restoration of forests does not fully ensure multi-target continuous and non-exhaustive utilization of resources and forest ecological systems. It is necessary to reform the said system and ensure unbundling of environment protection and economic functions.

Biological and landscape diversity

Occupying less than 6 per cent of the area of Europe Ukraine possesses about 35 per cent of its biodiversity. Biosphere of Ukraine counts more than 70 thousand of species, of those flora — over 27 thousand, fauna — over 45 thousand of species. During the last years one could observe an increase o number of species of plants and animals, which are included in the Red Book of Ukraine.

Ukraine is situated at the crossing of migration ways of many species of fauna, its territory is crossed by two main global routes of migration of wild birds; certain places of nesting are of international importance. More than 100 species of migratory birds are protected in accordance with international obligations.

The nature and reserve fund of Ukraine consists of more than 7608 territories and sites with a total area of 3,2 million hectares (5,4 per cent of the total area of the country) and 402,5 thousand hectares within the coastal line of the Black Sea. The share of nature and reserve territories in Ukraine is insufficient and remains considerably smaller than in the most countries of Europe, where the areas occupied by nature and reserve territories are, in average, 15 per cent.

An extensive development of agriculture caused a considerable decrease of landscape diversity. More than 40 per cent of the area of Ukraine was occupied in the past by step landscapes. At present they are about 3 per cent. 30 per cent of all species of flora and fauna, included in the Red Book of Ukraine, are concentrated on these territories.

For the years of independence the area of nature and reserve fund of Ukraine doubled however in certain cases the sites of nature and reserve fund are under competence of central executive authorities, for which nature and reserve activity is not a priority.

To terminate the processes of worsening of condition of environment it is necessary to increase the areas of lands of ecological network that is a strategic task in achieving the ecological balance of the territory of Ukraine. An increase of area

of national ecological network should mainly take place as c result of expansion of the existing and establishment of new sites of nature and reserve fund.

The tasks in terms of protection of biodiversity are not resolved during privatization of lands, preparation and implementation of programmes of sectoral, regional and local development. Lack of boundaries of sites settled on terrain under the procedure established by law results in breaching of requirements of the reserve regime. The paces of demarcation of littoral protection shelter-belts ale seas, rivers and around water bodies, which perform the role of ecological corridors, are slow.

II. Put 10 questions to the text.

III. Hold a discussion in the group to broach the topic "Strategy of National Ecological Policy of Ukraine".

Practical Work

Exercise 1. Match the words (1-5) with similar meanings (a-e):

1.	hidden	a. clever
2.	ingenious	b. final
3.	joint	c. silly
4.	ridiculous	d. together
5.	ultimate	e. unseen

Exercise 2. Decide if the following statements are true (T) or false (F). Give your reasons:

1. Parents should negotiate with their children about school. _____
2. Negotiation is about achieving a result which both sides can benefit from. _____
3. A negotiation is a meeting in which the parties do not need each other's agreement in order to achieve an effective result. _____
4. The negotiation process means setting the climate, presenting your case, getting useful information, controlling movement, using adjournments. _____
5. Negotiating is a key communication skill for all learners of Business English. _____

Exercise 3. Fill in the gaps with words from the list:

arbitrate, drawbacks, force, industrial action, lay-offs, lump, sum, mutual, negotiable, overtime, reject, redundant, sack

1. Many employers are prepared to talk to their workforces about wages, but say that things like reduction of the working week are not _____.
2. Many workers still gladly accept the opportunity to work _____ if the foreman asks them.
3. The union members _____ the company's offer and decided to take strike action.
4. The courts were called upon to _____the dispute.
5. They arrived at a solution which was to the _____ satisfaction of both sides.
6. In some countries, if the proprietor of a company _____ a worker without notice, he can be fined.
7. In times of recession the thread of _____ workers increase.
8. In most West European countries legal protection is provided for workers. This means that employees cannot be _____ to take early retirement.
9. But often younger workers are attracted by the offer of a _____payment.
10. Everyone hopes that they will not remain _____for long once they have lost their job.
11. Such people do not see the _____ until it is too late.

The phone is a very useful business tool for immediate communication. But making a phone call is not always easy - especially if you don't know the person on the other end of the line very well.

Exercise 4. How comfortable are you speaking English on the phone.

Remember that sounding polite and helpful doesn't just depend on the words you use, but the way you say them and also if you are talking to someone face-to face on your body language. Basic business phone language, very much like small talk, consists of constantly repeated expressions with little variations. Complete the questionnaire below using the correct form of the following verbs:

have, lose, shout, wish, keep, try, want, sound, misunderstand
Be honest! Can you remember a time when you…

1. totally _____what someone said on the phone?
2. really _____rude and unhelpful because you were busy?
3. constantly_____ to ask the other person to repeat what they said?
4. just _____ putting off a call because you did not want to speak English?
5. actually_____ at anyone on the phone?
6. completely _____track of the conversation?
7. just_____you could talk to the other person face to face?
8. even_____pretending you were out to avoid taking a call?
9. really _____to kill the person on the other end of the phone?
10.

Exercise 5. The telephone is being used more and more as a way of communicating. It's cheaper than face-to-face meetings, more convenient and saves time. Sometimes the only contact the customer has with your place of work is the telephone and their first impression is very important. As far as that caller is concerned your voice is the voice of a company or organisation.

Make a list of all the things that annoy you when you telephone an organisation. Underline the sentences which mean you get annoyed when you phone.

You probably get annoyed when:

- *no one answers the telephone.*
- *you're not greeted and you don't know if you've got the right number.*
- *no-one tells you that you're being transferred and the telephone goes dead.*
- *the other person just answers 'yes' or 'no' and doesn't give enough information.*
- *the other person doesn't listen properly.*
- *the other person talks too much.*

Exercise 6. Make up a list of golden rules for someone who needs to make telephone calls related to work. Did you include some of the following points?

- plan the call first.
- smile and introduce yourself (and your company if you are at work).
- say why you are ringing.
- agree any action.
- finish the call politely.

Exercise 7. Read the following words in the boxes and match them to their meanings.

webcam

videophone

mobile phone, mobile (BrE)/cellphone, cellular phone, cellular (AmE)

public telephone/payphone

extension **page**

WAP phone: (WAP - wireless application protocol)

cordless phone, cordless

1. A phone you can take with you and use anywhere.
2. A mobile phone with access to the Internet
3. Phone in a public place operated with money, a credit or ***a credit card.***
4. An extension not connected by a wire, so you can use it around the house or in the garden.
5. One of a number of phones on the same line, in a home or office.
6. Allows you to receive written messages.
7. A camera attached to a computer and phone line, so two people talking on the phone can see each other.
8. A special phone with a screen so you can see the other person.

Exercise 8. Now determine which equipment each of these people would use and put your correct answer in the table after the text.

1. A lawyer who needs to stay in contact in court, but can't have a ringing phone.
2. A building contractor who works in different places.
3. Someone who wants to stay in touch whilst they are in the garden.
4. A company manager who wants to discuss something with managers in different offices at the same time.
5. A computer enthusiast who wants to see the person she is talking to.
6. Someone who is out but doesn't have a mobile.

Exercise 9. Here are a number of expressions that you may use them when making a call:

a)

Could I speak to ...
This is N speaking
I want to speak to ...
Call N please

Just a moment
Coming
On his (her) way
It is for you

Hello, is N there?	Mr. N is on the line
Will you ask him to call N?	Mr. N is calling
Can I leave a message?	You are wanted on the phone
I'll call again	Can you hold on a minute?
He's gone out	Hold on please
He will be back soon (later)	He is in (out)
Can I take a message?	N called and left message

b)

to give a ring = ring up (G.B.) = to give a buzz (Am.)
to make a call = to take a call
to get smb on the phone
private (business) call = personal call
You're through = You are connected (Am)
to dial a number
to book call = to make a book call
to charge
line is clear (free) = ringing tone
advice duration and charge
to cancel order
booth = call box
coin-box telephone
truck call = long distance call
local call
get through = get in touch with = put smb through
tel. customer
telephone repair service
DDD (direct distance dialing)
tel. directory
to have a conversation with
unobtainable number
link = connection
intercom = inside line
outside line

c) interference

We're been cut off (disconnected)
There's no reply
Are you there?
Are you with me?

Sorry, I can't hear a thing
Put down the receiver. I'll call back.
Try calling me again
I could scarcely hear you
Pardon, I didn't catch what you said

Exercise 10. Read the text and speak about American phone communicating:

Phone books have white, blue and yellow pages. The white pages list people with phones by last name. The blue pages contain numbers of city services, government services, and public schools. Businesses and professional services are listed in a special classified directory - the Yellow Pages.

The area covered by one area code may be small or large. For example, New York City has one area code, but so does the whole state of Oregon. There is an area code map of the U.S. and Canada in the front of the white pages.

Pay phones have numbers in the U.S. This means you can arrange to call a friend at a phone booth. Or if you are making a long distance call and run out of money, give the number on your phone to the person you're talking to. Then hang up the receiver and they can call you back.

If you make a long distance call and get a wrong number, call the operator and explain what happened. This means that you can make the call again to the right number without having to pay more money; or you can have the phone company mail you a credit coupon that has the same value as the phone call.

Some companies advertise a service called WATS. You can dial a special number without a long distance charge. These are called "toll-free numbers" and the area code for all of them is 800. WATS means Wide Area Telephone Service.

The U.S. Postal Service has competitors. Courier services send or transmit messages; parcels and freight are delivered by a number of companies. Check the Yellow Pages for details.

There are two ways of sending things safely through the post office: registered and certified mail. Certified is much cheaper. Ask at the post office for more information.

You can have mail sent to you General Delivery in any town. It will be held ten days, or up to a month if the sender write s " Please hold 30 days" on the envelope. Using the zip code will speed up delivery.

Remember, you cannot usually send telegrams or make telephone calls from U.S. post offices.

In phone booths in the U.S. there are usually directions like these for using the telephone. All phone numbers have seven digits, though letters and numbers are sometimes used in combination. These may be phone books — or directories - under the telephones.

These are two main kinds of long distance calls: dial-direct and operator-assisted. You can direct dial calls in most parts of the U.S. Look in the white pages directory for long distance rates or for more information on making long distance calls. Or you can call the operator for help. If you need a phone number that's not in your phone book, call Directory Assistance.

To make a long distance call, you'll need to know the three-digit area code. Dial 1 plus the ***area code*** plus the ***number,*** and an operator or a computer voice will tell you how much money to deposit. On operator-assisted calls, the operator will ask you to deposit more money before your time is up. On dial- direct calls, you'll be cut off at the end of the time you paid for unless you put more money in the slot.

LESSON 10

I. Read and translate the text. Briefly summarize the content of the text.

STATE ECOLOGICAL MONITORING

Operation of the State Environment Monitoring System

The Law of Ukraine "On Environmental Protection" (Articles 20, 22) provides for the establishment of State Environment Monitoring System (hereinafter - SEMS) and monitoring the state of the environment and the level c its pollution. These functions entrusted to the Ministry of Environment and Natural Resources (hereinafter - the Ministry of Environment) and other central executive authorities, who are the subjects of the state environment monitoring system, as well as enterprises, institutions and organizations whose operations cause or may cause environmental degradation.

The Ministry of Environment and Natural Resources of Ukraine provides organizational and technical support for the Commission and its sections.

Monitoring Air Quality

The State Hydrometeorological Service (the Ministry of Emergencies) monitors air pollution in 53 Ukrainian cities and towns using 162 stationary sites, two route observation sites and two cross-border transfer stations.

The chemical composition of atmospheric precipitations and their acidity are under observation.

The program of compulsory monitoring of air quality includes seven pollutants: dust, nitrogen dioxide (N02 sulfur dioxide (S02), carbon monoxide, formaldehyde

(H2C0), lead and benzopyrene. Some stations carry oi surveillance for additional contaminants. Precipitations and snow cover are also analyzed to determine whether the contain pollutants.

The State Environmental Inspectorate (the Ministry of Environment) provides a selective sampling on the sources of emissions. Over 65 parameters are measured.

The Sanitary and Epidemiological Service (the Ministry of Health) monitors air quality in residential and recreational areas, particularly near major roads, sanitary protection zones and residential buildings in schools, on the territories of kindergartens and hospitals in the cities and towns and in the working area. In addition, air quality in residential area is analyzed upon the receipt of complaints of residents.

Monitoring Land Water

The State Hydrometeorological Service (the Ministry of Emergencies) monitors hydrochemical state of water 151 water bodies and carries out hydrobiological observations at 45 water bodies. The data are collected on 46 parameters, which allow assessment of the chemical composition of water, biogeneous parameters, presence of suspended particles and organic substances, the main pollutants, heavy metals and pesticides. 8 water bodies a observed for chronic toxicity of water. The indicators of radioactive contamination of surface waters are also determined.

The State Environmental Inspectorate (the Ministry of Environment) provides a selective sampling and obtains data on more than 65 parameters that are measured.

The State Committee for Water Management monitors rivers, reservoirs, canals, irrigation systems and pieces of water within multi-purpose water resources utilization systems, water supply systems, trans-border watercourses and reservoirs in zones around nuclear power plants. Water quality is monitored using physical and chemical parameters for 72 reservoirs, 164 rivers, 14 irrigation systems, 1 firth and 5 multi-purpose channels. In addition, as a part of radioactive monitoring, water management organizations monitor the amount of radio nuclides in surface waters.

The Sanitary and Epidemiological Service (the Ministry of Health) carries out observations over the sources of centralized and decentralized drinking water supply and recreation sites along rivers and reservoirs.

The enterprises of the State Geological Survey (the Ministry of Environment) monitor the state of groundwater In the places of monitoring, the level of groundwater (occurrence), its natural geochemical composition is assessed. 22 parameters, including heavy metals and pesticides concentration are determined.

The Sanitary and Epidemiological Service (the Ministry of Health) provides chemical analysis of groundwater intended for drinking consumption.

Monitoring Coastal Waters

The State Hydrometeorological Service (the Ministry of Emergencies) operates a coastal water monitoring network, which includes monitoring stations in the places

of waste water disposal and research stations located in the coastal areas of the Black and Azov Seas. The existing stations measure 16 to 26 hydro chemical parameters of water and bottom sediments.

The State Inspectorates of Black and Azov seas (the Ministry of Environment) operate their own monitoring systems. Their responsibilities include monthly sampling and analysis of the impact of pollution sources located on the coast; monitoring of discharges from ships; pollution resulted from activities of exploration and extraction of oil gas and building materials offshore; supervising the use of marine living resources.

The State Sanitary and Epidemiological Service (the Ministry of Health) monitors the quality of seawater in the areas of recreation and recreational water use.

Monitoring Soils

The State Hydrometeorological Service (the Ministry of Emergencies) monitors soil contamination of agricultural lands with pesticides and heavy metals in the settlements. The samples are taken every five years, the samples for heavy metals tests in the towns of Kostiantynivka and Mariupol are taken every year.

The State Environmental Inspectorate (the Ministry of Environment) provides sampling at industrial sites throughout the country. Altogether, 27 parameters are measured.

The institutions of the Ministry of Health monitor soil conditions in the territories of their possible negative impact on the health of the population. These are mostly the areas covered by the cultivation of agricultural products, the areas where pesticides are used, soils in residential areas, children playgrounds and schools. Soil samples taken in the places of storage of toxic wastes on the territory of enterprises and outside such territories in the places of storage or disposal are investigated.

The Ministry of Agricultural Policy monitors the use of agricultural soils. Radiological, agro-chemical and toxicological indicators, the residual amount of pesticides, chemicals and heavy metals are determined.

Monitoring Indicators of Biodiversity

Due to the limited budgetary funding, monitoring is only carried out over the species that are of industrial interest (trees, fish and game).

The enterprises of the State Forestry Committee monitor forest vegetation in 24 regions of the country. They assess the biomass, its damages caused by biotic and abiotic factors; hunting fauna, biodiversity, radiologic; measures.

Some studies are carried out with international support, or under the international programs.

Monitoring Radiation

The State Hydrometeorological Service (the Ministry of Emergencies) monitors radioactive contamination of the atmosphere by daily measurements of doses of gamma radiation exposure (GRE), impaction of radioactive particles from the

atmosphere and the content of radioactive aerosols in the air. 8 water bodies are monitored for radioactive contamination of surface waters. The State Hydrometeorological Service measures radioactive pollution of surface waters with cesium-137 and soil pollution around nuclear power plants.

The monitoring laboratories of the Ministry of Agricultural Policy carry out control in the areas of concentration of radioactive substances in soils and foods.

The Ministry of Emergencies monitors GRE doses at 10 automated stations near nuclear power plants. Within the 30-km zone around the Chernobyl Nuclear Power Plant (exclusion zone), the Ministry monitors the concentration of radio nuclides, the radio nuclides in atmospheric precipitations and concentration of "hot" particles in the air. The International Radioecology Laboratory of Chornobyl Centre for Nuclear Safety, Radioactive Wastes and Radioecology located in Slavutych monitors the effects of radiation on biota in the exclusion zone.

II. Put 10 questions to the text.

III. Hold a discussion in the group to broach the topic "Ecological Monitoring".

Practical Work

Exercise 1. Match the words (1-5) with similar meanings (a-e):

1. hidden	a. clever
2. ingenious	b. final
3. joint	c. silly
4. ridiculous	d. together
5. ultimate	e. unseen

Exercise 2. Decide if the following statements are true (T) or false (F). Give your reasons:

1. Parents should negotiate with their children about school. _____
2. Negotiation is about achieving a result which both sides can benefit from. ___

3. A negotiation is a meeting in which the parties do not need each other's agreement in order to achieve an effective result. _____
4. The negotiation process means setting the climate, presenting your case, getting useful information, controlling movement, using adjournments. _____
5. Negotiating is a key communication skill for all learners of Business English. _____

Exercise 3. Choose the best word to complete the sentence:

1. I _____ recommend that you check the report one more time before you submit it.
   a. deeply b. sincerely c. strongly d. unfortunately
2. The _____ includes the title of the document, the writer's name, and the page number.
   a. context b. header c. margin d. tone
3. The first name is _____in the letter, so I don't know if the writer is a man or a woman.
   a. abbreviated b. consistent c. relevant d. sufficient
4. This list would be easier to rend if you _____ each team.
   a. bulleted b. commenced c. packaged d. terminated
5. What does the _____NASA stand for?
   a. acronym b. caption c. topic d. sentence

Exercise 4. a) Read a bit of information about the styles of writing; b) complete the letter below with the words:

contact, grateful, apologise, enclosing

a) There are three major styles of writing: formal, standard, informal. Most business correspondence uses a standard style with elements of the other two styles, depending on the reader.

b)

Fun Flash Cameras
7750 Beltway St. Carson
OH44277, USA
phone: (365) 972-3350
fax: (365)972-3351

Dear Ms (Mr) Smith,
We regret the problem you experienced with the Fun Flash 300X... We are _____for your bringing this problem to our attention. The manufacturing problem has been corrected. We _____ for the inconvenience this has caused you.
We are _____ a refund and another two Fun Flash 300X Disposable Cameras. We hope that you will use them and see the true quality of our products.
Please do not hesitate to _____ us if you have any more problems.

Sincerely,
Karina Sotills,
Customer Service

Exercise 5. a) Read and learn how to write e-mails; b) complete the e-mail bellow with the words:

print, personal, retrieving, attachment

a) How do you write e-mails?

E-mails is primarily a *medium* rather than a *style* of communication. People write e-mails in many different styles, depending on corporate policy and whether they are writing a business letter to a client a memo to subordinates or a note to colleagues.

E-mail is not a private way of communicating. Employers have the right to access your e-mail. Detailed mail can be retrieved by experts. Use caution when communicating confidential or legally sensitive information. Make sure you know who will read the information you are sending.

b)

To: istrait@biz.com
From: tgrav@biz.com
CO: markmark@biz.com
Subject: Employee Accountability report

Hi, Linda,
I was glad to hear the report was well accepted. Please send me the document file as an _____. I'd like to _____ the final version of the report and keep a copy of it in my _____ files. I've had some problems _____ attachments through my mail box at work. Reply to my other account adoldrimer@ola.com.
Thanks,
Tim

Exercise 6. Choose the word with a similar meaning as the underlined word:

1. A fax will be better than e-mail because the company needs your signed name.
   a. address b. ellipsis c. medium d. signature
2. Please erase this message after your read it.
   a. delete b. forward c. retain d. tilt
3. She asked him to reply to her message at the earliest possible time.
   a. ASAP b. PS c. CC d. Re
4. When you write using all large letters, people read it as shouting.
   a. capitals b. caution c. colleague d. communication
5. You can download a recent version of the program for free.
   a. confidential b. previous c. precise d. up-to-date

Exercise 7. Match each word (1-5) with the correct definition (a-e):

1.	employ	**a.** go beyond or above
2.	exceed	**b.** use another person's words
3.	overuse	**c.** hire someone to work you
4.	quote	**d.** make to fit a special need or purpose
5.	tailor	**e.** use too much

Introduction and greetings at the first meetings

You never get a second chance to make a first impression! If you give people a favourable first impression of yourself, you will find them much easier to deal with. A welcoming smile and a friendly greeting put people at their ease, even if they have had a bad journey, or if they are feeling tired, worried or cross.

Exercise 8. You know that there is a ritual way to meet and greet people. We follow certain rules or formulas. This light conversation may not carry much meaning in itself, but is designed to "break the ice" - to ease into a conversation with someone you have just met.

Introducing yourself

Greeting	Introduction	Response
Hello Good morning/ afternoon How do you do?	Let me introduce myself. My name's…….. My name's……. I'm…….	Pleased to meet you. I'm…… Nice to meet you. Mine's … Nice to meet you. I'm …….

Read the dialogues, in which the speakers did the following

- *greeted each other;*
- *introduced themselves or someone else;*
- *exchanged information about their jobs;*
- *acknowledged information;*

and put appropriate words in them from the tables.

Introducing someone else

Request for introduction	Introduction	Response
Could you introduce me to ……..? I haven't met…… I don't know anyone here. You'll have to introduce me.	Of course. Let me introduce you to …… I'm sorry. This is …… Of course. I'll introduce you to….. This is……. Let me introduce you to……., this is ……	Nice to meet you. Very nice to meet you. Nice to meet you. Nice to meet you.

1) A: Hello, let me …..1….myself. My name's Klein, Gunther Klein.

B: Pleased to ….2…you. I'm Geoff Showdown.

2) A: How do …3…do? My name's Paul Matthews.

   B: Nice to meet you. Mine's Akira Mishima.

3) A: Hello, I'm Tom.

   B: …4..to meet you. My name's Francine.

4) A: Peter, …5...you introduce me to the Marketing Manager?

   B: Of course, John ... Philip, ..6.. me introduce you to John, our new Computer Manager.

   C: Nice to meet you, John, we're going to be working together.

5) A: Herr Tubingen, 1 haven't ..7.. your Managing Director yet.

   B: Oh, I'm sorry. Come and meet him. Dr Mannheim, ..8.. is Mr. Roberts. He's over from the States on a visit.

   C: Very nice to meet you, Mr. Roberts. How long are you here for?

6) A: Jane, I don't know ….9.. here. You'll have to introduce me.

   B: Of course, I'll introduce you to Roger first. He's the host ... Roger, this is Susan. She's just moved to the area.

   C: Nice to meet you, Susan. Do you come from these parts?

7) A: Let me introduce you two. Maxine, this is Francis.

   B: Nice to meet you, Maxine. Are you an old friend of Tony's?

   C: Oh yes, Tony and I have known each other for years, haven't we?

   A: Yes, that's..10...

Some introductions are more formal than others. The use of first names indicates informality.

Unless you know a client very well and he or she is the same age as you are it's better to be polite and formal rather than familiar and over-friendly. However, if you sound too formal, people may think you are being unfriendly!

Exercise 9. Along with a handshake, nod of the head, hug, or hand gesture, we engage in small talk. Now read the text "Small talk" and answer the following questions:

1) What is "small talk"?
2) When will you be considered rude?
3) Why should you be careful about jokes?
4) What subjects should you avoid in small talk?
5) Why is it careful about jokes?
6) How long may small talk last?

Small talk

Small talk can take place between people who know each other, or at first-time meetings. When meeting someone for the first time, you are limited in what you may say and what you may not say. You do not want to be rude by asking personal questions or saying anything negative.

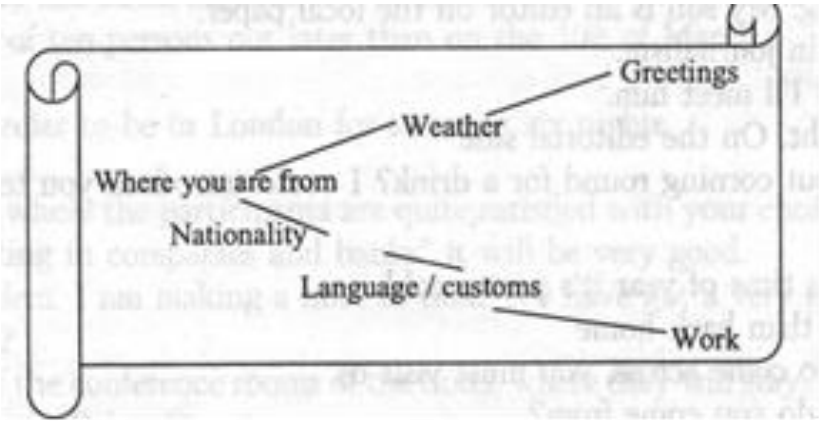
Englishmen and Americans, in particular, engage in so much small talk that they are often seen as superficial or boring. Foreigners may not have the opportunity to see them in a more serious mode and assume they continue to talk about the weather and sports long after they have gone home. And some people do, however, for the most part, small talk is a restrictive and unnatural type of communication, not typical of private discourse. In the business world, there is Small talk until a relationship is established, after which one may talk specifically about business or personal concerns. After business hours, when socializing with colleagues or associates, you will need to know the acceptable topics of conversation: weather, sports, good news, travel, positive comments about your host country, movies, entertainment, food, or the challenges of learning a foreign language. If asked, you may discuss work, where you live, or where you are staying. After work hours, when people want to relax, discussions about work or anything too serious are usually not welcomed.

Subjects to avoid are: money, prices, personal health, bad news, religion, politics, and details about your family or children (unless specifically asked).
Finally, be careful about jokes! Humour varies from culture to culture, and you may offend without realizing it; there are few things more awkward than an unfunny joke, or one that is in bad taste. People have very specific ideas about good and bad taste; you may be walking on dangerous ground when you attempt a joke and you may never realize how your joke was received because people may laugh out of politeness — or perhaps sympathy.

Small talk may last from a few minutes to over an hour, depending upon circumstances. At its best, it results in a nice impression being made, a common

interest being explored, or a rapport created that could be the basis of a future meeting or more serious relationship.

Exercise 10. Small talk plays a role in people's getting to know one another, it establishes a polite and friendly tone, and it is a time for quiet observation. Skipping the formality of small talk would be in bad taste in business as elsewhere; minimizing its importance would be a mistake. Now look at the following picture and try to underline main points of small talk with a foreign visitor in the text.



R: Susan, I'd like you to meet Mary Nelson, this is Susan from our Sales Department.
S: Hello. How are you? How are you? Pleased to meet you. Mrs. Nelson, may I ask where you are from?
M: Yes, sure. I am from Ukraine. From Odessa.
S: Oh, I hear that's Black Sea's gateway to Ukraine. Odessa is a crossroads of cultures, languages and trade.
M: Yes, that's right.
S: Well, how do you like it in London?
M: It's beautiful here. I like the weather.
S: Yes, lovely. I love spring weather.Mrs.Nelson, may I call you Mary?
M: Yes, certainly. May I call you Susan?
S: Yes, Mary. What brings you to England?
M: Well, I am working with the Computer Centre. And what kind of work do you do?
S: I'm in advertising. I work downtown.
M: Do you live in London?
S: No, actually I live in the country not far from London. I commute to work. It only takes 30 minutes by car.
M: That's good. Listen, it was very nice meeting you, but I see someone I must say hello to. Please excuse me.
S: Yes, of course. It was nice talking to you.

Exercise 11. The following four dialogues are in the wrong order. Rearrange them to make a natural flow of conversation.

Dialogue 1

- Really? What did you expect?
- No, I've been to the States before, but this is the first time in Atlanta.
- So, what do you think of Atlanta?
- Fine, I'll see what I can arrange.
- Well, it's not what I expected.
- There is a part like that. You must let me show you around.
- Well, I suppose I thought it would be more traditional.
- That would be interesting.
- Is this your first trip over here?

Dialogue 2

- I'm sure. I hope to get back here again.
- That's a pity. There's a lot to see.
- Good. Are you here on business then?
- Are you staying long?
- Really? That's interesting. What line are you in?
- No, just a couple of days.
- Yes, we're thinking of setting up an office here.

Dialogue 3

- That would be nice.
- That's interesting. My son is an editor on the local paper.
- I believe you're in journalism.
- Really? I expect I'll meet him.
- Yes, that's right. On the editorial side
- Yes, what about corning round for a drink? I could introduce you to him.

Dialogue 4

- Scotland. This time of year it's pretty cold.
- A bit warmer than back home
- Well, if you do come across, you must visit us
- Oh, so where do you come from?

- Yes, that's right. The best time to visit is in the summer.
- I can imagine. I've never been but people tell me it's very beautiful.
- How do you find the weather here?
- Maybe I'll get across next year.

Exercise 12. Try to do this quiz. Underline your variant.

1) Which is the best definition of a good conversationalist?
   a Someone who always has plenty to say.
   b Someone who has plenty of amusing stories to tell.
   c Someone who will listen carefully to what you have to say.
   d None of these (give your own definition).
2) If someone just says "What?" after you've carefully explained something, do you...
   a go through the explanation again using different words?
   b feel that you have been wasting your time?
   c feel that you have not been believed?
   d None of these (give your own definition).
3) What impression do you try to give to the people you deal with in business?
   a pleasant **b** sincere **c** efficient **d** tactful
4) What impression do you try not to give?
   a aggressive **b** shy **c** nasty **d** clumsy
5) What impression may you give to a stranger by: ……?
   a yawning **b** talking in a loud voice **c** sniffing **d** tapping fingers
6) If a man wearing jeans and no tie comes into your office, do you think he…
   a isn't correctly dressed?
   b can not be important?
   c is quiet normal
   d someone who has come to fix the electricity or something?
7) If someone shakes your hand very hard and long, this means …

a he is very pleased to see you

b he is trying to show you that they are sincere

c he is waiting for you to say something

d he is reliable and friendly

8) If a Canadian businessman keeps stepping backwards while he is talking to a Mexican businessman, this means…

a he does not like Mexicans

b the Mexican is trying to be too friendly

c Northern people do not feel comfortable standing as close to another person as Southern people normally do

d Canadians are less friendly than Mexicans.

9) If you are receiving a business card from a Japanese person, it is more polite to take it with …

a your left hand

b your right hand

c both hands

d one hand and present your own card with the other

10) If you are meeting an Arab client it is polite to …

a get straight down to business

b wait until *he* raises the topic of business

c stick to small talk for the first few minutes

d ask him to close the door of his office to prevent interruptions.

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