

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
РІВНЕНСЬКИЙ ДЕРЖАВНИЙ ГУМАНІТАРНИЙ УНІВЕРСИТЕТ

Мороз Л.В., Романюк С.К., Денисюк Л.В., Данілова Н.Р., Ковалюк В.В.,
Ясногурська Л.М., Трофімчук В.М., Мічуда Н.М.



ENGLISH FOR ECOLOGISTS

*Навчально-методичний посібник з англійської мови для студентів-екологів
психолого-природничого факультету*

English for Ecologists: навчально-методичний посібник з англійської мови для студентів-екологів психолого-природничого факультету / уклад. Л.В. Мороз, С.К. Романюк, Л.В. Денисюк, Н.Р. Данілова, В.В. Ковалюк, В.М. Трофімчук, Л.М. Ясногурська, Н.М. Мічуда. – Р.: РДГУ, 2024. – 128с.

Укладачі:

Л.В. Мороз, професор, кандидат філологічних наук, завідувачка кафедри іноземних мов.
С.К. Романюк, кандидат філологічних наук, доц. кафедри іноземних мов.
Л.М. Ясногурська, кандидат філологічних наук, доц. кафедри іноземних мов,
Л.В. Денисюк, старший викладач кафедри іноземних мов РДГУ.
Н.Р. Данілова, старший викладач кафедри іноземних мов РДГУ,
В.В. Ковалюк, старший викладач кафедри іноземних мов РДГУ,
В.М. Трофімчук, старший викладач кафедри іноземних мов РДГУ,
Н.М. Мічуда, старший викладач кафедри іноземних мов РДГУ.

Рецензенти:

Л.Є. Купчик, кандидат педагогічних наук, доцент, завідувач кафедри іноземних мов Національного університету водного господарства та природокористування;

Т.В. Кучма, кандидат філологічних наук, доцент кафедри романо-германської філології Рівненського державного гуманітарного університету.

Затверджено на засіданні кафедри іноземних мов Рівненського державного гуманітарного університету, Протокол № 10 від 16 листопада 2023 року.

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Трофімчук В.М., Ясногурська Л.М., Мічуда Н.М.2024

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ПЕРЕДМОВА

Структура навчально-методичного посібника дає можливість викладачеві вибрати оптимальні шляхи організації як аудиторної, так і самостійної роботи студентів з урахуванням рівня їх знань. Посібник складається з двох модулів, які складаються з дванадцяти тем; текстів професійного напрямку зі словниками і вправами лексичного та граматичного характеру. Спеціальні тексти для читання, перекладу та переказу сприяють розвитку навичок одержання інформації та її аналітичної обробки. Більшість текстів автентичні та адаптовані. Посібник передбачає повторення граматичного матеріалу та виконання граматичних тестів, системне повторення тем у процесі виконання комунікативно-спрямованих вправ, використання матеріалу в розмовних формулах.

Запропонований навчально-методичний посібник розроблено для студентів-екологів психолого-природничого факультету денної та заочної форми навчання. Навчальний посібник можуть використовувати на природничих факультетах студенти, аспіранти та науковці відповідного профілю.

ПРОГРАМА НАВЧАЛЬНОЇ ДИСЦИПЛІНИ
Модуль 1.

ТЕМА 1. ECOLOGY

Grammar: Present Simple.

ТЕМА 2. ECOLOGY AS A SCIENCE

Grammar: Past Simple.

ТЕМА 3. BRANCHES OF ECOLOGY

Grammar: Future Simple.

ТЕМА 4. METHODS IN ECOLOGY

Grammar: Present Continuous.

ТЕМА 5. ECOSYSTEM

Grammar: Past Continuous.

ТЕМА 6. RELATIONSHIP BETWEEN ORGANISMS

Grammar: Future Continuous.

Модуль 2.

ТЕМА 1. ENERGY EXCHANGE

Grammar: Present Perfect.

ТЕМА 2. ECOLOGICAL SITUATION IN UKRAINE

Grammar: Past Perfect.

ТЕМА 3. DEPLETION OF THE OZONE LAYER

Grammar: Future Perfect.

ТЕМА 4. AIR POLLUTION

Grammar: Modal Verbs.

ТЕМА 5. WATER POLLUTION

Grammar: The Passive Forms.

ТЕМА 6. WASTES

Grammar: Infinitive.

MODULE 1.

THEME I. ECOLOGY

Grammar: PRESENT SIMPLE.

1. Прочитайте і перекладіть текст.



For millennia man had to struggle against nature in order to survive and develop. However, as economy developed and the scientific and technological revolution increased, the correlation of forces between man and nature changed. Man gradually grew so strong that he dared to declare himself the “king of nature” and contemplated conquering and remolding nature to his liking. As a result his economic achievements began to have an increasingly negative effect on nature, on the biosphere.

Here are some figures.

Road and factory construction and industrial development take away to 7 million hectares of land every year. Forests disappear at a rate of some 20 hectares a minute. According to the International Union for Conservation of Nature and Natural Resources, 76 animal species and several hundred plant species of the Earth became extinct in the last 60 years alone.

Each year the world economy ejects into the atmosphere over 200 million of carbon monoxide, more than 50 million tons of diverse hydrocarbons, over 120 million tons of ash and nearly 150 million tons of sulphur dioxide. They fall back upon the Earth in the form of “acid rains”.

The threat of ecological catastrophe approaches simultaneously from different directions: pollution and impoverishment of the seas, oceans, rivers, underground waters, pollution and destruction of woods and agricultural grounds, pollution of the atmosphere, reduction of the protective ozone layer, dramatic changes of climate, rising

of the ocean level, accumulation of deadly radioactive substances made by uncountable nuclear power stations, impoverishment of the vegetative and animal world, exhaustion of resources of the planet.

All these ecological problems are caused by disturbing the natural balance in the Earth's ecosystem. Ecosystem is a community of plants, animals and homo sapiens (as a part of the world ecosystem) within a particular habitat. To study the ecosystem in relation to their environment is the aim of the science called ecology. Nowadays the words "ecology" is on everyone's lips because our everyday life, our health and, in the end, the survival of the mankind depend on the solution of ecological problems facing the man.

2. Determine whether the statements are correct.

1. All ecological problems are caused by solar activity.
2. Carbon monoxide is produced only by cars.
3. International Ecological organization is called the International Union for Conservation of Nature and Natural Resources.
4. Man often calls himself a "king of seas".
5. Ecology is a science studying insects. 6. Economic activity usually has a negative effect on nature.

Vocabulary

moisture	волога
nutrient	поживна речовина
predetermine	передвіщувати
to affect	впливати, уражати
variable	змінний, мінливість
on greater scale	у більшому масштабі
graze	пастися
irrigation	зрошення

I. Translate the following text.

Ecology is a study of the relationship of plants and animals to their physical and biological environment. Life involves all systems—living organisms (biotic factors) or nonliving variables (abiotic factors), such as water, soil, climate, light, and oxygen. All interacting biotic and abiotic



factors make up an ecosystem. The physical environment includes light and heat or solar radiation, moisture, wind, oxygen, carbon dioxide, nutrients in soil, water, and atmosphere. The biological environment includes organisms of the same kind as well as other plants and animals.

Ecology originated from natural history in the end of the XIX century and was developing rapidly after the Second World War in connection with the growing rates of the population and negative results of the anthropogenic activity – irrationally high utilization of natural resources and accumulation of tremendous amounts of unutilized wastes polluting air, water and soil.

The present ecological situation has been predetermined by the entire earlier development of the civilization. Now in the whole world great attention is paid to the harmful effects of the human activity on natural environment which have an international importance. All the problems that appear at the age of scientific and technological revolution are ecological, because they are connected with environmental protection and with the future of civilization. For example: the problems of demography and energetics, economics and nutrition, legal, social, political, pedagogical, etc. Environment is all of the external factors affecting an organism.

Like all the other living beings, humans have clearly changed their environment, but they have done so generally on a grander scale than have other species. Some of these changes such as the destruction of the world's tropical rain forests to create grazing land for cattle or the drying up of almost three-quarters of the Aral Sea, once the world's forth- largest freshwater lake, for irrigation purposes have led to altered climate patterns, which in turn have changed the distribution of species of animals and plants.

2. Answer the following questions.

1. What does the physical environment include? 2. What does the biological environment include? 3. What is attention of the whole world paid to now? 4. All the problems that appear at the age of scientific and technological revolution are ecological, aren't they? Why? 5. How have humans changed their environment?

3. Find in the text the English equivalents of the following Ukrainian word combinations.

взаємозв'язок рослин і тварин, так само, як і; зумовлений розвитком, стати свідомим чогось, шкідливий ефект, людська діяльність, пов'язаний з, природне середовище, міжнародне значення, захист оточуючого середовища, впливати на організм, неповага людини до, піклуватися про, складова частина, велика кількість, мати справу з, робити можливим, у певній місцевості, по відношенню до, концентруватися на, перемінна величина, взаємодія біотичних та абіотичних факторів, руйнування лісів, в більшому масштабі, кліматична модель.

GRAMMAR EXERCISES

1. Put in am, is or are.

1. The weather is very nice today. 2. I ... not tired. 3. This case ... very heavy. 4. These cases ... very heavy. 5. The dog ... angry. 6. We ... hungry. 7. My brother and I ... fond of tennis. 8. I ... 17, I ... 22. 9. Ann ... at home but her children ... at school. 10. I ... a student. My sister ... an architect.

2. Write full sentences. Use am / is / are each time.

1. (My shoes very dirty).....
2. (My bed very comfortable)
3. (I not happy today)
4. (She 6 years old)
5. (The houses old)
6. (Those flowers beautiful)
7. (The examination not difficult)

3. Put in am/is/are.

1. Чия це книжка? — Це не моя книжка. Це його книжка.
2. Де твоя ручка? - Вона в пеналі.
3. Чий це портфель? — Це портфель моєї сестри.

4. Чи є це олівці? — Це олівці не мої. Це олівці моого сина.
5. Чия це кімната? - Це кімната моого брата. В кімнаті стіл та стілець.
6. Це твій зошит? — Цей зошит не мій.
7. Де твої книжки? - Мої книжки на полиці.
8. Це його батьки? Так, його.
9. Чий це папір? — Це мій папір. — А де мій? Твій папір в столі.
10. Ця дівчинка моя сестра. Їй сім років.
11. Це моя кімната. Кімната велика. В кімнаті багато книжок.
12. Де ваші батьки? — Вони на роботі.
13. Чий це кіт? — Цей кіт мій.
14. Це моя машина. Машина нова. Вона в гаражі.
15. Де твоя сестра? — Вона вдома.
16. Я не учень. Я студент.
17. Його брат учень. Він у школі.
18. Мої батьки інженери. Вони на роботі.
19. Ви лікар? - Ні, я вчитель.
20. Твоя сестра учениця? — Ні, вона інженер. Вона на роботі.
21. Її сестра не секретарка. Вона вчителька.
22. Ці люди лікарі? - Ні, вони льотчики.
23. Ваша сестра вдома? — Ні, вона на роботі.
24. Наш батько вчений.
25. Його тітка не лікар. Вона актриса.
26. Це моя книжка. Вона на столі.
27. Мій двоюрідний брат не вчений, він інженер.
28. Це картини. Вони на стіні. Картини дуже гарні.
29. Моя бабуся пенсіонерка. Вона не на роботі. Вона вдома.
30. Ваші діти школярі? — Так, вони школярі.

4. Put in am/is/are.

1. He ... a student. He ... a good student.
2. His father ... a doctor.
3. My mother ... not a teacher.
4. ... your sister a pupil? — Yes, she
5. They ... at home now.
6. This ... my house.
7. ... they at school? — No, they ... not at school.
8. ... your father a pilot? — Yes, he
9. Nicky... not a student. He ... a pupil. He ... at school now.
10. These men ... drivers.

- 11.I ... a pupil, I ... not a student.
12. ... this your book? — This book ... not mine. My book ... in my bag.
- 13.Michael has a brother. His brother ... 20. He ... a student. He ... at home now.
- 14.These ... his newspapers.
- 15.... there any books on your table? - Yes, there
- 16.I ... a doctor. I ... a good doctor.
- 17.... his friends at school now? — No, they ... in the garden.
18. ... her sister a teacher? - Yes, she

5. Поставте подані речення в питальній і заперечній формах.

1. My friend lives in London.
2. Her uncle speaks French badly.
3. It often snows in winter.
4. He is my best friend.
5. His parents get up very early.
6. They listen to the news every evening.
7. We usually spend our holidays in the country.
8. They are our relatives.
9. My sister wants to become a teacher.
- 10.Her child likes to read the fairy-tales.

6. Розкрийте дужки, вживаючи дієслова в *Present Simple*.

1. I (not to walk) to work every morning.
2. She (to wash) her car once a week.
3. We (to spend) our holidays in the country.
4. He (not to hope) to go there.
5. She (to go) to the theatre twice a month.
6. Mary (not to live) near the station.
7. You (to take) your dog for a walk?
8. She always (to invite) her friends to her birthday party.
9. He (to drink) coffee every morning.
- 10.Her brother (to study) in London?
- 11.I (to go shopping) every day.
- 12.He (to speak) Spanish?
- 13.I (to visit) my friend every week.
- 14.Helen (not to read) a lot.

15. He (to sleep) till nine o'clock.

7. Поставте подані речення в заперечній і питальній формах.

1. He goes to school every day.
2. My sister works here.
3. They eat a lot.
4. We work every day.
5. I come from Ukraine.
6. He comes from Germany.
7. They live in the USA.
8. He plays football every day.
9. I visit my parents very often.
10. His father works at an office.
11. She gets up at seven o'clock.
12. They play tennis very often.
13. We go to the cinema on Saturdays.
14. He wants to become a pilot.
15. My brother watches television every night.
16. I read newspaper every day.
17. Her father finishes his work at six o'clock.
18. Nick goes to bed at nine.
19. He goes to school by bus.
20. We skate once a week in winter.

8. Розкрийте дужки, вживаючи дієслова в *Present Simple*.

1. She (to learn) English.
2. I (to like) music.
3. My brother (to be) a school-boy. He (to go) to school.
4. Michael (to do) his lessons every day.
5. She (to live) in this house.
6. After supper my sister (to go) for a walk.
7. We (to visit) our grandparents very often.
8. The girl (to sing) very well.
9. My father (to work) at school.
10. Usually I (to have) dinner at 3 o'clock.

11. He (to want) to become a doctor.
12. Our mother (to come) home very late.
13. His brother (to go) in for sports.
14. She (to like) reading very much.
15. They often (to take) a bus.

9. Make a test:

1. Maggie and Carol good friends.
a) am b) are c) is d) isn't
2. Sue a science teacher.
a) are not b) is c) are d) am
3. Mark Steven a student at Kennedy High School. It an old school.
a) am / is b) are / is c) is / am d) is / is
4. Margarita from Spain. I from Turkey.
a) is / am b) are / is c) am / is d) is / are
5. You and I at the same age.
a) am b) isn't c) are d) is

4. Retell the Text: “What is Ecology?”

TOPIC 2. ECOLOGY AS A SCIENCE

GRAMMAR: PAST SIMPLE TENSE

Vocabulary

to derive	походити
to be aware of	усвідомлювати
to appear	з'явитися
abundance	велика кількість
ripe	зрілий
distinct	визначений, окремий

I. Translate the following text.



Ecology studies the relationships of plants and animals to their environment, the relationships of plants and animals to one another, and the influence of man on ecosystem.

The word “ecology” comes from the Greek word “oikos”, meaning house or place to live in, and from the word “logos”, meaning science or study. The word was first used by the German naturalist Ernst Heackel in 1869 and used by Charles Darwin shortly thereafter. In recent years many people have become aware of man's abuse of his environment, and the words “environment” and “ecology” become public.

Ecology was derived from natural history – mother of biological science before the 20th century, though it was not recognized as a distinct science. Charles Darwin, the Swiss-American naturalist Louis Agassiz, the American Henry Baldwin and many other great biologists contributed much to ecological knowledge in 1900's. By the beginning of the 20 century, plant ecology grew at a more rapid place than did animal ecology because plants do not migrate and move about. At the beginning of XX century the ecological branches were formed in botany, zoology, hydrobiology, and phytotechnology. At the III Botanical Congress the plant ecology



was divided into the ecology of individual organism, autecology, and that of community organisms – synecology. During 1920's a number of important works in the field of population ecology were published.

In 1935 the English scientist A.Tensli introduced the notion of ecosystem. The American scientist R.Lindeman suggested the main methods of ecological system energy balance. The teachings of V.I.Vernadsky about biosphere and noosphere laid the basis of quantitative analysis in substances runover and evidence of close relations of a man and his natural environment.

After World War II ecology became very much more quantitative, Mechanisms of biological ecology were the focus. Principles of physics and chemistry were brought in as an integral part of ecology. The advent of the computer made possible the handling of large amount of data, and the quantitative aspects of ecology thought grew quickly.

2. Answer the following questions.

1. What does ecology study? Who was the first to use the word "ecology"?
2. What science was the mother of biological science?
3. Who contributed much to ecological knowledge in 1900's,?
5. What works on ecology were published during 1920's?

3. Find the English equivalents of the following Ukrainian word combinations.

вивчення екології, взаємозв'язок рослин і тварин, відношення рослин і тварин, впливати на екосистему, походити від, використовуватися кимось, стати свідомим, шкода оточуючому середовищу, значна кількість, екологічне знання, з'явилося незважаючи на той факт, що; визнана як, певна наука, зробити внесок, визріли умови, визначилась як, рости більш швидкими темпами, рослинна екологія, тваринна екологія, стосовно біології, були опубліковані.

GRAMMAR EXERCISES

1. Complete the sentences put the verb into the correct form, positive or negative. (simple past tense)

1. It was warm, so I took off my coat. (take)
2. The film wasn't very good. I didn't enjoy it very much. (enjoy)
3. I knew Sarah was very busy, so I disturbed her. (disturb)
4. I was very tired, so I went to bed early. (go)
5. The bed was very uncomfortable. I slept very well. (sleep)
6. Sue wasn't hungry, so she ate anything. (eat)
7. We went to Kate's house but she was at home. (be)
8. It was a funny situation but nobody laughed. (laugh)
9. The window was open and a bird flew into the room. (fly)
10. The hotel wasn't very expensive. It cost very much. (cost)
11. I was in a hurry, so I had time to phone you. (have)
12. It was hard work carrying the bags. They were very heavy. (be)

2. Complete the sentences in simple past tense.

1. I brushed my teeth. (brush)
2. Tom played tennis with his friends. (play)
3. They studied for their exam. (study)
4. Susan talked to me quietly. (talk)
5. Thomas helped me with my homework. (help)
6. Daniel washed his car. (wash)
7. The baby cried a lot. (cry)
8. The man walked so fast. (walk)
9. The mechanic fixed the car. (fix)
10. My mother watered the flowers. (water)
11. The policeman stopped the bus. (stop)
12. Alicia carried her bag. (carry)
13. She opened the door. (open)
14. Sonia missed the train. (miss)
15. I liked my teacher. (like)

3. Complete the sentences in simple past tense.

1. She went to bed at 10 o'clock yesterday. (go)
2. Jenny slept very late as well. (sleep)
3. They burned a lot of calories in that marathon. (burn)

4. Benny [] about a year ago. (quit)

5. Todd [] 10 pounds when he was born. (is)

6. Dan [] his car to car wash. (take)

7. The boy [] off the couch in the morning. (fall)

8. The bride [] after the groom. (run)

9. The hot air balloon at the field [] a lot of attention in yesterday's game. (draw)

10. My mother [] the birds before we left for vacation. (feed)

4. Complete these sentences in the PAST TENSE, using the correct verb:

* play * enjoy * watch * listen * talk * phone * stop * walk * travel * like * stay
 I watched the late film on TV last night. 1. We really the concert last night. It was great! 2. She with friends in Brighton last summer. 3. Italy very well in the last World Cup. 4. Her parents by train from Shanghai to Moscow. 5. I you four times last night but you were out. 6. We along the beach yesterday. It was lovely. 7. She the film but she didn't like the music. 8. The men work at exactly one o'clock. 9. I to the new Sting album yesterday. It's great. 10. They to us about their trip to Madagaskar. It was very interesting.

5. Complete the conversation with WAS / WASN'T / WERE / WEREN'T.

A: Where were you last night? I phoned you but you at home.

B: I out with friends. We at the Bluenote Café.

A: Julia there?

B: No, she Why?

A: Oh, I just wondered.

B: She out with Nick. They at the Oasis. I think.

A: No, they

B: How do you know?

A: Because I there!

6. Complete the man's statement with the PAST SIMPLE form of the verbs in brackets:

Last night I (go) to my favorite restaurant in West Street. I (leave) the restaurant at about 11 o'clock. It (be) a warm evening and I (decide) to walk along the beach. Suddenly, I (hear) a noise. I (turn) and (see) three boys aged about eighteen. One boy (come) up to me and (ask) me the time. When I (look) down at my watch, he (hit) me and I (fall) to the ground. Another boy

..... (take) my wallet. I (shout) for help. Then they (run) away. F) Complete the story. Use the verbs in the brackets: Last year I went (go) on holiday. I (drive) to the sea with my friend. On

the first day we (look) at the beautiful buildings and (eat) in lots of restaurants. The next day (be) very hot so we (drive) to the sea. We (leave) our clothes in the car and (sunbathe) and (swim) all day. At six o'clock we (walk) to our car, but the car(be) there. We (buy) some clothes and (go) to the Police Station. The police (be) nice and we (sleep) in the police station.

4. Retell the Text: ECOLOGY AS A SCIENCE

TOPIC 3. BRANCHES OF ECOLOGY

GRAMMAR: FUTURE SIMPLE TENSE

Vocabulary

emphasis	наголос, увага
advent	прогрес
hande	мати справу з
gene	ген
habitat	місце проживання
fossil	викопний
realm	галузь
terrestrial	земний

I. Translate the following text.

As with any science, ecology is divided into various subdivisions and fields.

Ecological studies may focus on the relationships between individual organisms, on the physical and chemical features of their environment.



This is physiological ecology.

Synecology or biocenology accounts on a community of organisms such as a forest; this subdivision is sometimes further divided into population ecology, community ecology, and ecosystem ecology. Population ecology is the study of the processes that affect the distribution and abundance of plants and animals populations. Community ecology embraces the organization and functioning of communities, which are interacting populations of the species living within a particular area or habitat.

Autecology observes an individual organism or species in relation to its environment and to other species. Its subdivision demeontology covers the structure

and dynamics of the population quantities of separate species. Another branch ethology is a science about animals behaviour.

The study of man in relation to his environment, including the relationships among men or groups of people is called human ecology. The ecological study of man can be divided into two fields: human ecology proper, which studies the relationships between human biological factors and the natural environment, and social ecology which studies the relationships among natural environment, population, technology, and society. The branch of science concerning socio-economic factors influencing environment is known as socioecology and deals with ecological law, education, demography, ecological management, etc. The study of the animal-born diseases is the realm of medical ecology or public health ecology.

The further important area of ecology paleoecology includes the study of the ecology of fossil organisms. Other branches of ecology include marine ecology, freshwater ecology, and terrestrial ecology.

2. Answer the following questions.

1. Ecology is built on some principles, isn't it? 2. What is population ecology? 3. What does human ecology study? 4. Is the ecological study of man divided into subdivisions? 5. Does social ecology deal with education?

3. Find in the text the English equivalents of the following Ukrainian word combinations.

стала більш статистична, стосовно механізму, більший наголос на, фізичні принципи привнесені, складова частина, прогрес комп'ютерів, обробляти велику кількість інформації, поділятися на галузі, взаємозв'язок між, риси оточуючого середовища, впливати на розподіл населення, кількість населення, важлива складова, мати справу з, громадська екологія, певні різновиди, місце проживання, відношення людини до оточення, викопні організми, хвороби тварин, галузь медицини, екологія охорони здоров'я.

GRAMMAR EXERCISES

1. Use the correct form of the FUTURE SIMPLE:

- 1.A: Oh! You've got a ticket for the party.B: Yes. I (see) it on Friday.
- 2.A: Tea or coffee?B: I (have) coffee, please.
- 3.There isn't any cloud in the sky. It (be) a lovely day.
- 4.We (win) the match. We're playing really well.
- 5.The festival (last) for ten days.
- 6.I (have) a meal with a few friends. There (be) about ten of us.
- 7.Phil (come) round us tomorrow. We (be) at the airport at 9:30.
- 8.Why don't you come with us. I'm sure you (enjoy) the show.
- 9.That(not / cost) more than \$50.
- 10.The museum (open) at 9:00 everyday but tomorrow it (not / be) opened at 9:00.
- 11.I (pay) it back to you as soon as I get my salary.
- 12.The manager said,"We (have) the meeting on Thursday."

2. Fill in WILL or BE GOING TO:

- 1.A: Why do you need so much sugar?B: Imake a cake.
- 2.A: Oh no! I've left my purse at home and I haven't got any money on me!B: Don'y worry. Ilend you some.
- 3.A: I don't know how to use this mixer. B: That's OK. I show you.
- 4.A: Why are all these people gathered here?B: The Prime Ministeropen the new hospital ward.
- 5.A: Did you remember to buy the magazine I asked for?B: Sorry, I didn't. Ibuy it when I go out again.
- 6.A: What's that on your curtains?B: It's a stain. Itake them to the dry cleaner's tomorrow.
- 7.A: These bags are very heavy. I can't lift them.B: Icarry them for you.
- 8.A: I hear you're going to Leeds University in September.
B: Yes, Istudy French and German.
- 9.A: Why don't you tidy your room?B: Iplay football in ten minutes, so I haven't got time.
- 10.A: How can we get all this home?B: Iask James to come and help.
- 11.She has bought some wool. Sheknit a sweater.
- 12.A: This problem is very difficult.B: Ihelp you to solve it.
- 13.A: Why are you taking down all the pictures?B: Ipaint the room. 14.Iclimb that mountain one day.
- 15.Look at that young man. He looks very pale. Hefaint.
- 16.A: Why are buying that spade?B: Iplant some trees in my garden at the back of the house.
- 17.Sheget better. There are positive signs.
- 18.I'm hungry. Ihave something to eat.
- 19.Ibe 38 years old next week.

3. Put the verb in to the correct form using WILL or GOING TO:

1.A: Why are you turning on the television?B: I (watch) the news.

2.A: Oh, I've just realized. I haven't got any money.B: Don't worry. That's no problem. I(lend) you some.

3.Those clouds are very black, aren't they? I think it (rain).

4.A: I've got a terrible headache.B: Have you? Wait here and I (get) an aspirin for you.

5.A: Why are you filling that bucket with water?B: I (wash) the car.

6.A: I've decided to re-paint this room.B: Oh, have you? What colour (you / paint) it?

7.A: Look! There's smoke coming out of that house. It's on fire!B: Good heavens! I call the fire-brigade immediately.

8.A: The ceiling in this room doesn't look very safe, does it?B: No, it looks as if it (fall) down.

9.A: Where are you going? Are you going shopping?B: Yes, I (buy) something for dinner.

10.A: I can't work out how to use this camera.B: It's quite easy. I (show) you.

11.A: What would you like to drink – tea or coffee? B: I (have) tea, please.

12.A: Has George decided on what to do when he leaves school? B: Oh yes. Everything is planned. He (have) a holiday for a few weeks and then he (start) a computer programming course

TOPIC 4. METHODS IN ECOLOGY

GRAMMAR: PRESENT CONTINUOUS TENSE

Vocabulary

variable	перемінна величина
require	вимагати
obtain, gain	отримувати
apply	застосовувати
measure	вимірювати
precise	точний
in spite of	незважаючи на
determine	визначати
design	конструювати
permit	дозволяти
provide	забезпечувати
increasingly	все більше
sample	зразок
follow, track	прослідити
nutrient	поживна речовина

I. Translate the following text.



Because ecologists work with living systems possessing numerous variables, the techniques used by physicists and chemists, mathematicians and engineers require modification; they are not easily applied as those obtained in other sciences. Ecological measurements probably never will be as precise or as

subject to the same analysis as measurements in physics, chemistry, or the biological science. In spite of these problems, various aspects of the environment can be determined by physical and chemical means, ranging from simple chemical identifications and physical measurements to the use of sophisticated mechanical apparatus.

The development of the biostatistics and experimental design permit a statistical approach to the study of ecology. Ecosystemic analysis underlies the

ecological approach to the study of biosphere. The use of statistical procedures and the application of the computer science are providing new insights into population interaction and ecosystem function.

Mathematical programming is becoming increasingly important in applied ecology, especially in the management of natural resources and agricultural problems having an ecological basis.

Biotelemetry and other electronic equipment products of space age permit the rapid sampling of plant and animal populations. Such tools enable ecologists to follow from the distance the movements and behavior of a free-ranging animal by radio signals.

Radioisotopes are used for tracking the pathways of nutrients through the different components of ecosystem and for the determination of food chains.

The use of laboratory microcosms are useful in examining rates of nutrient cycling, ecosystem development, and another functional aspects of ecosystems. Microcosms are aquatic and soil microsystems, consisting of biotic and nonbiotic material from natural ecosystem. Microcosms enable the ecologists to duplicate experiments and to perform experimental manipulation on them.

2. Answer the following questions.

1. Why do methods of other sciences in ecology need modification?
2. Will ecological methods be precise? 3. What does the development of the biostatistics and experimental design permit? 4. Where is mathematical programming becoming increasingly important ? 5. What does electronic equipment enable?

3. Find in the text the English equivalents of the following Ukrainian word combinations.

працювати з живими системами, численні перемінні величини, вимагає модифікації, легко застосовуватися, досить просто, отримання тепла, точні виміри, підлягати аналізу, незважаючи на проблеми, визначена фізичними засобами, починаючи з, використання складних апаратів, розвиток

статистики, застосування комп'ютерів, забезпечення нових можливостей вивчення, все більш важливий, прикладна екологія, управління природними ресурсами, брати зразки рослин, поведінка тварини, прослідити шляхи.

GRAMMAR EXERCISES

1. Fill in the blanks using present progressive tense.

1. Look! it is raining (rain)
2. They (watch) the news on TV.
3. The birds (fly) to South.
4. Matt (wait) for the bus.
5. The chef (not cook) anything today.
6. What Helen (do) at the moment?

2. Fill in the blanks with PRESENT CONTINUOUS:

1. The children (play) outside now.
2. She (read) the newspaper at the moment.
3. I (do) my homework now.
4. I (eat) my dinner now.
5. (you / want) a pizza?
6. They (watch) TV now.
7. Listen! I (not / like) spaghetti. And you?
8. The baby (sleep) now.
9. My mother (cook) dinner!
10. He (write) a letter to his pen-friend.
11. She (not / play) football whole day.
12. Mary (listen) to music now.
13. Tom usually (drink) coffee, but he (drink) tea now.

3. Build up sentences:

1. He / like watching TV / but / he / not / watch / at the moment / because / he / sleep //
2. What / Wendy / do / at the moment / ? // She / clean / her teeth / bathroom //
3. mother / can (-) / help me / now / because / she / cook / kitchen //
4. Why / you / eat / sandwich / now / ? // Because / I / be / hungry //
5. Tim / now / go / work / bicycle //
6. children / play / games / now //

4. Complete the sentences.

Use the present continuous form of the verb in brackets. Use contractions where possible.

1. You (use) my mobile phone!
2. My dad (wash) his car.
3. It (not rain) today.
4. Who (she / chat) to now?
5. What (you / do) at the moment?
6. We (sit) on the train.
7. The students (have) lunch in the canteen.
8. 'Are you making dinner?' 'Yes, I .'

5. Write the words in the ing-form form.

Feed, walk, wash, play, do

- Can I speak to Brad, please? I'm sorry, he's _____ his pet now.
- Can I speak to Paul, please? I'm sorry, he's _____ his homework now.
- What about Kelly? No, sorry, she's _____ her pet in the park now.
- Can I speak to Jenny then? Sorry, she's _____ the dishes now.
- Can I speak to Alice or Alex, please? I'm sorry, they're _____ tennis now.

6. Make up negative sentences in Present Progressive.

- the sofa / Sam / is / on / not / sitting.
- Are / playing / not / the cats.
- cooking / Mother / not / my / is
- Reading / friends / her / are / not

7. Make up questions.

- now / Tom / coffee / is / drinking?
- playing / Now / the / boys / are?
- the / skipping / girl / now / is?
- the / eating / fish / cats / are?

4. Retell the Topic: "METHODS IN ECOLOGY"

TOPIC 5. ECOSYSTEM

GRAMMAR: PAST CONTINUOUS TENSE

Vocabulary

subunit	підрозділ
landscape	ландшафт
environment	природне середовище
community	живе середовище
species	вид, види
depend on	залежати від
existence	існування
proceed	починати
tissue	тканина
layer	шар
pattern	модель
inexorably	невблаганно
interwine	переплітатися
evolve	розвиватися
consequence	наслідок
decay	розділ
pine	сосна
breeding	порода
tissues	тканини

I. Translate the following text.



The ecologist views the Biosphere as broken down into a series of subunits that he terms ecosystem. For convenience, any segment of the landscape that includes the living (biotic) and nonliving (abiotic) components is called an ecosystem. The abiotic portion of each environment of the biosphere includes the flow of energy, nutrients, water and gases, and the concentrations of organic and inorganic substances in the environment. A community is a collection of species' populations. In a stand of pines there may be many species of insects, birds, of mammals, each a separate breeding but each dependent on the other for its continued existence. A

species, furthermore, is composed of individuals, single functioning units as organisms. Beyond this level, the units of the biosphere are those of the organism: organ system composed of organs, organs of tissues, tissues of cells; cells of molecules, and molecules of atomic elements and energy. The progression, therefore, proceeding upwards from atoms and energy, is toward fewer units, layers and more complex in pattern, to each successive level.

The biotic and abiotic parts of an environment are inexorably intermixed and intertwined. Through nearly three billion years of evolution, the living and nonliving characteristics of the earth's surface have slowly evolved together. For example, oxygen in the earth's atmosphere is direct consequence of photosynthesis by the green plants of the world, and yet all animal life and plant decay requires oxygen. An ecosystem can be a pond, meadow, forest, sand dune, bog or even a small aquarium. In particular, it is a complex of the interactions of all organisms with their physical environment and with one another. We can speak of the entire planet earth as an ecosystem; it is the ultimate ecosystem with which we are primarily concerned. The dynamics of the ecosystem involve the flow of matter and energy and include the birth, growth, death, and decay of all organisms.

2. Answer the following questions.

1. What is ecosystem? 2. How is ecosystem arranged? 3. What does abiotic component include? 4. Is a stand of pines an ecosystem? 5. The biotic and abiotic parts of an environment are intermixed, aren't they?

3. Find in the text the English equivalents of the following Ukrainian word combinations.

розглядати як, розбити на підрозділи, називається як, для зручності, ландшафт включає, кожне середовище, потік енергії, неорганічні речовини, вид популяції, насадження сосен, залежати від, протягом існування, складається з, одиниці біосфери, тканина клітини, складна модель, послідовні рівні, обов'язково пов'язані, кінцева екосистема, окрема порода.

GRAMMAR EXERCISES

1. Decide whether to use 'was' or 'were'.

1. Boris.....learning English. They swimming in the lake. Your father..... repairing the car. I reading a magazine. You..... packing your bag. My friends watching the match on TV. It raining. The dog barking. The children brushing their teeth. Anne and Maureen singing a song.

2. Fill in the blanks with a correct form of PAST CONTINUOUS:

1.Alice hurt herself while she (skate). 2.I met my neighbor while I (walk) home from work.3.Sally saw a friend while she (ride) her bicycle along Park St. 4.Peter fell asleep while he (study).5.Bob stepped on Jane's feet while they (dance) together.6.I cut myself while I (shave).7.Mr. and Mrs. Brown burned themselves while they (bake) cookies. 8.Tommy had a nightmare while he (sleep) at a friend's house.

3. Fill in the blanks with a correct form of PAST CONTINUOUS:

1.It was very cold. The sun was not shining. (not / shine)2.It wasn't a stormy night. The wind (not / blow)3.He wasn't sleeping. He (look) at the ceiling.4.They were having a rest. They (not / work).5.They were very happy. They (enjoy) the party.6.He was at home. He (watch) a movie on TV. 7.He was getting worse. He (not / recover).8.We (travel) in the north of Turkey when we were on holiday. 9.She (drive) so fast when the accident happened.10.I(not / sleep) when you came in.

4. Write the words in brackets in the correct forms in English using Past Continuous Tense.

1. He all day yesterday. (rest)

2. We through the window when mother came in. (look)

3. They a newspaper when I entered. (read)

4. I to her but she. didn't hear me. (speak)

5. I didn't go for a walk because it (rain)

6. When you telephoned I my room. (sweep)

7. They with John's wife when I came in. (**talk**)

8. While we we heard a shot. (**play**)

9. She along the embankment when I met her yesterday. (**walk**)

10. We home when, it started to snow. (**go**)

11. I very hard when he called. (**study**)

12. She when his friend arrived. (**sleep**)

13. They to the lecture when the light went off. (**listen**)

14. She still when we returned home. (**work**)

15. When he his garden he found a silver coin. (**dig**)

4. Retell the Topic: ECOSYSTEM

TOPIC 6. RELATIONSHIP BETWEEN ORGANISMS

GRAMMAR: FUTURE CONTINUOUS TENSE

Vocabulary

herbivore	травоїдний
carnivore	м'ясоїдний
chain	ланцюг
cross linkages	пересічні зв'язки
exceed	перевищувати
consumer	споживач
decomposer	розкладач
fungi	гриби
omnivorous	всєїдний
mammal	ссавець
reduce	скорочувати
increase	збільшувати
violate	порушувати
diversity	різноманіття
inherent	притаманний
com (community)	спільнота
disease	хвороба

1. Translate the following text.



Ecologists are interested not only in the flow of energy through an ecosystem but also in the complex interrelationships of all organisms within a community. One of the easiest ways to understand the interrelationships of organisms in a community is to study which organisms

eat which other organisms. The simplest direct-line relationships from the primary producer – a green plant – to a herbivore to a carnivore is the food chain. There are many food chains within any single ecosystem, and there are many cross linkages from one food chain to another, so that the entire food web for a community of organism results.

Food chains are usually quite short, seldom exceeding four or five consumers. Organisms at all levels of food web die and decay. The bodies of all dead plants and animals are returned to the soil through the action of decomposers, mainly bacteria, fungi, and microorganisms. Man is in a unique place in the earth's world web. He is omnivorous and operates on several trophic levels, eating plants, insects, mammals, birds, fish and other organisms. Man also often shortens the food chain and reduces the number of organisms in the system in order to achieve increased productivity of a certain organism. One important ecological principle man violates in order to produce food for himself is the principle that diversity in nature appears to produce stability of an ecosystem. The close cooperative interacting structure of the many kinds of plants and animals in an ecosystem produces an inherent stability and inertia to catastrophic change. Neither climate fluctuation, insects invasion, nor virus infection itself will be able to destroy the ecosystem.

Violating this principle, man plants large field of corn and only corn. The virus, fungus, or insect may attack the corn crop. A monoculture is highly unstable to damage by climate, insects, or disease. Man must have monoculture for food, but the cost of maintenance for stability and productivity is very high indeed.

2. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.

relation, produce, exceed, consume, die, active, decomposed, main, bacterial, operator.

3. Fill in the gaps. Copy and translate the sentences.

violates, diversity, interrelationships, reduces, omnivorous, community, decomposers, web.

Ecologists are interested also in the complex ____ of all organisms within a community. The entire food web for a ____ of organism results. Organisms at all levels of food ____ die and decay. The bodies of all dead plants and animals are

returned to the soil through the action of _____. Man is _____. Man often shortens the food chain and ____ the number of organisms in the system. Man ____ one important ecological principle in order to produce food for himself. ____ in nature appears to produce stability of an ecosystem.

GRAMMAR EXERCISES

1. Change the verb into the correct form:

1. He _____ (wait) for quite some time.
2. Tomorrow at this time I _____ (dance) at a party.
3. Next week at this time I _____ (sunbathe) at the beach.
4. At 5 o'clock you _____ (help) your brother.
5. This evening at 8 o'clock, she _____ (watch) a movie with her friends.
6. Nicole _____ (have) a hard time.
7. We _____ (smile), and they _____ (cry).
8. Rebecca _____ (clean) the house, and John _____ (wash) the dishes.
9. Tonight they _____ (talk), _____ (dance) and _____ (have) a good time.
10. It _____ (rain) tonight.
11. Tomorrow we _____ (rest) and _____ (have) fun.
12. Tonight at 10 o'clock she _____ (come) home.
13. The day after tomorrow he _____ (move) his apartment.
14. At this time tomorrow, I _____ (sleep) deeply.
15. You _____ (work) very hard to get that deal.

2. Change the verb into the correct form:

1. I _____ (wait) when she _____ (come).
2. They _____ (work) when he _____ (call).
3. He _____ (read) when I _____ (call) him.
4. When the bus _____ (arrive) we _____ (stand).
5. When the party _____ (start), we _____ (talk) outside.
6. When the police _____ (arrive), we _____ (go) north.
7. You _____ (watch) the movie when we _____ (come).
8. It _____ (rain) when she _____ (return).
9. Tiffany _____ (jog) when you _____ (meet) her.
10. The water _____ (boil) when we _____ (come) back.
11. The waiter _____ (serve) when the manager _____ (arrive).

12. When we (call) him, he (rest).
 13. Steven (fly) to Italy when his mail (arrive).
 14. The kids (play) with the ball when I (call) them.
 15. You (sleep) when she (return).

3. Make future continuous 'yes / no' questions:

When the boss comes,

1. _____ (I / sit) here?
2. _____ (John / us) the computer?
3. _____ (Jane and Luke / discuss) the new project?
4. _____ (we / work) hard?
5. _____ (you / talk) on the telephone?
6. _____ (she / send) an email?
7. _____ (they / have) a meeting?
8. _____ (he / eat) lunch?
9. _____ (you / type)?
10. _____ (he / make) coffee?

4. Make sentences with **WILL BE -ING**:

- 1.I'm going to watch television from 9 until 10 o'clock this evening. So at 9.30 I
- 2.Tomorrow afternoon I'm going to play tennis from 3 o'clock until 4.30. So at 4 o'clock tomorrow I
- 3.Jim is going to study from 7 o'clock until 10 o'clock this evening. So at 8.30 this evening he
- 4.We are going to clean the flat tomorrow. It will take from 9 until 11 o'clock. So at 10 o'clock tomorrow morning
- 5.Tom is a football fan and there is a football match on television this evening. The match begins at 7.30 and ends at 9.15. So at 8.30 this evening
- 6.Don't phone me between 7 and 8. (we / finish) dinner then. 7.A: Can we meet tomorrow afternoon?B: Not in the afternoon. (I / work).
- 8.Do you think (you / still / do) the same job in ten years' time?
- 9.If you need to contact me, (I / stay) at the Hilton Hotel until Friday.
- 10.A: (you / see) Laura tomorrow?
 B: Yes, probably. Why?
 A: I borrowed this book from her. Can you give it back to her?

5. Ask questions with **WILL YOU BE -ING?**

- 1.You want to borrow your friend's bicycle this evening. (you / use / your bicycle this evening?).....

2. You want your friend to give Tom a message this afternoon.(you / see / Tom this afternoon?).....

3. You want to use your friend's typewriter tomorrow evening.(you / use / your typewriter tomorrow evening?).....

4. Your friend is going shopping. You want him/her to buy some stamps for you at the post office. (you / pass / the post office when you're in town?).....

4. Retell the Topic: RELATIONSHIP BETWEEN ORGANISMS

TEST

1. Read and complete the text below. For each of the empty space (1-12) choose the correct answer (A, B, C or D).

Global Threat to Birds

Although birds can ride out extreme weather conditions and threats from natural predators, their greatest 1 _____ comes from loss of habitat, mainly due to human development and related activities. Forests and wetlands are vital to birds' survival because they provide food and water, 2 _____, protection from predators and places for rest and food during their migrations. Over the past 100 years, much of the 3 _____ and wetlands has been depleted and thus seriously changed the landscape and resources for these 4 _____ birds. As a result, bird numbers have been seriously affected in many parts of the worlds. Of the 9,600 known bird species, nearly 1,200 are threatened with 5 _____ (source: Johns Hopkins Center for Communications Program). In North America, for example, bird observers have seen a steady 6 _____ in the numbers of many of the birds that migrate to Central and South America. Deforestation and problems with their summer breeding habitats, urban 7 _____ and development, contamination of environment are significantly altering and removing valuable ecosystems on which birds depend. Wetlands are areas that link water and land. They include a wide range of areas from marshes and 8 _____ to areas between dry land and rivers, streams, lakes and coastlines. Though they are not necessarily wet year-round, they harbor very rich 9 _____ for plants and animals, including insects, which are a primary food for birds. Thus, wetlands provide vital habitat for many species of plants and animals, including about half of all known bird species.

As wetlands become 10 _____ and disappeared, the domino effect extends directly to respective qualities of life of humans and wildlife, as wetlands also provide needed protection of water quality vital for humans. They act as a sponge 11 _____ floodwaters, and they filter out impurities and pollutants that could flow into main water sources. Wetlands also serve to clean the air of carbon dioxide, which is absorbed by plants. Armed with the comprehensive information now being collected about the

world's migratory birds, scientists hope to discover clues and develop 12 ____ relating to Earth's environmental health.

- 1 A act B impurity C contamination D threat
- 2 A home B room C kitchen D shelter
- 3 A landscapes B forests C lands D waters
- 4 A migrating B respecting C polluting D knowing
- 5 A increasing B widening C shortening D extinction
- 6 A link B decline C flow D floodwater
- 7 A withdrawal B development C sprawl D disappearance
- 8 A areas B wetlands C sources D swamps
- 9 A fiber B health food C nutrients D fast food
- 10 A fragmented B related C discovered D ranged
- 11 A to link B to depend C to absorb D to flow
- 12 A impurities B qualities C sums D solutions

2. Match the words with their definitions.

13. wetlands	A. the seasonal movement of a complete population of animals
14. deforestation	B. the cutting down and removal of all of the trees in a forested area
15. migration	C. to spread out in a straggling or disordered fashion
16. to sprawl	D. are areas that link water and land

3. Match the words with their antonyms.

17. to absorb	A. improvement
18. extreme	B. narrow
19. wide	C. moderate
20. decline	D. to emit

4. Match the words with their synonyms.

21. threat	A. municipal
22. to alter	B. to change
23. urban	C. pollution

24. contamination D. warning

II. Переклад фахового тексту

5. Translate the text Global Threat to Birds into Ukrainian I.

Translate the following text.

GRAMMAR TEST

Choose the correct option.

1. Tomorrow,

- a) I will go to the park.
- b) I went to the park.
- c) I have gone to the park.
- d) I go to the park

2. I have already

- a) eat.
- b) ate.
- c) eaten.
- d) eating.

3. Currently,

- a) she live in Mexico.
- b) she lived in Mexico.
- c) she was living in Mexico.
- d) she is living in Mexico.

4. Since I was a child,

- a) I did not like ice cream.
- b) I have not liked ice cream.
- c) I wasn't like ice cream.
- d) I liked ice cream.

5. Next week,

- a) we are going to buy a new car.
- b) we buy a new car.
- c) we bought a new car.
- d) we have been buying a new car.

6. Before Maria and Juan arrived in Toronto,

- a) they has never spoken English.
- b) they have never spoken English.
- c) they had never spoken English.
- d) They will have not spoken English.

7. I was cooking dinner

- a) before you arrive.
- b) before you had arrived.
- c) before you arrived.
- c) before you have arrived.

8. Every day,

- a) Kevin wears sandals.
- b) Kevin wear sandals.
- c) Kevin wearing sandals.
- d) Kevin worn sandals.

9. By the time I graduate,

- a) I will being 30 years old.
- b) I will have being 30 years old.
- c) I will no be 30 years old.
- d) I will be 30 years old.

10. While Susan was driving,

- a) Frank talks on the phone.
- b) Frank will be talking on the phone.
- c) Frank talking on the phone.
- d) Frank was talking on the phone.

MODULE II.

TOPIC 1. ENERGY EXCHANGE

GRAMMAR: PRESENT PERFECT TENSE

Vocabulary

flow, stream	потік
surface	поверхня
radiate, emit	випромінювати
receive	отримувати
direct sunlight	пряме сонячне світло
scattered skylight	розсіяне небесне світло
reflect	відбивати
transmit	передавати
blow	дути
thickness	товщина
the boundary layer	пограничний шар
warm	теплий
moisture loss	втрата вологи
conduct	проводити
increase	збільшувати
rate	швидкість, рівень

I. Translate the following text.



The thing that makes all living organisms “go” is the flow of energy from and back to their physical environment. The sun radiation is the only source of energy which maintains life in biosphere of our planet. All surfaces radiate energy in relation to the temperature of the surface, and all organisms live in a complex radiation environment. A plant or animal out of doors during daylight may receive many streams of incident radiation, including direct sunlight, scattered skylight, light

reflected off the ground and nearby objects, and radiant heat emitted by the soil surface, by rocks and plants, by the water vapor and carbon dioxide of the atmosphere, and by the bases of clouds. Each plant or animal absorbs a certain fraction of the incident radiation, reflects some of it, and in some cases, such as tree leaves, transmits some.

Air blowing over the surface of a plant or animal will cool or warm it by convection. A boundary layer of air, across which there are temperature and moisture gradients, adheres to all surfaces. In the region that lies beyond the boundary layer the air moves freely and carries whatever heat is conducted to or from the animal surface. Hence, convection is a combination of heat conduction across the stationary boundary layer and mass transport of heat by air movement beyond the boundary layer. When wind blows across the organism, it reduces the thickness of the boundary layer, and there is an increase in the rate of heat exchange or moisture loss. The thickness of the boundary layer is related to the diameter or width of the plant or animal surface and to the wind speed. If a plant or animal is resting on a rock or on soil that is colder than it is, heat is conducted from the plant or animal into the rock or soil; if, on the other hand, the organism is colder than the surface upon which it rests, energy is conducted to the organism.

2. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.

physics, radiate, bound, lay, moist, combine, conduct, thick, wide, free.

3. Fill in the missing words. Copy and translate the sentences.

flow, transmits, conducted, absorbs, blows, surface, moisture, reflected.

The thing that makes all living organisms “go” is the ____ of energy from and back to their physical environment. A plant or animal out of doors during daylight may receive many streams of incident radiation, including light ____ off the ground and nearby objects. There is also radiant heat emitted by the soil ____, by rocks and plants. Each plant or animal ____ a certain fraction of the incident radiation, reflects some of it, and in some cases, such as tree leaves, ____ some.

A boundary layer of air, across which there are temperature and ____ gradients, adheres to all surfaces. In the region that lies beyond the boundary layer the air moves freely and carries whatever heat is ____ to or from the animal surface. When wind ____ across the organism, it reduces the thickness of the boundary layer.

GRAMMAR EXERCISES

1. Fill in the blanks with ALREADY or YET:

1. He hasn't called us
2. They have sent the letter.
3. John has bought the tickets for the football match. 4. We have been to Mexico three times.
5. You haven't visited Tokyo
6. Has John bought a new car ?
7. The plane has left.
8. Has she done it ? No, not
9. A: Haven't they arrived ? B: Oh, yes. They have arrived.
10. Hurry up! The class has started.
11. Be careful! They have painted the door.
12. Haven't you read the book ?

2. Put the verbs in brackets into PRESENT SIMPLE PASSIVE:

There is a chimpanzee which is called (call) "Bubbles". It (own) by Michael Johnson. It (keep) in his home. It(feed)every day by Michael Johnson himself. It(always / dress) in funny clothes. It (said) that "Bubbles" is Michael Johnson's onlyfriend

3. Complete the following sentences in the present perfect simple tense.

- 1) She ____ (to be) happy all day. 2) It ____ always _____ (to snow) here in December. 3) Dan ____ (to be) sick for three days. 4) Li and Susan ____ (to try) four times already and will not give up. 5) The old car ____ (to be) a piece of junk since I bought it. 6) We ____ not _____ (to take) this test before. 7) My uncle ____ (to be) to China. 8) Our father ____ never _____ (to drive) to California before. 9) I ____ (to speak) to the president before. 10) The old man ____ occasionally _____ (to need) help crossing the street.

4. Choose the correct verb from the list below to complete the following sentences.

take / work / find / see / speak / know / begin do / learn / eat / have / write / give / live / buy / be.

I met Barbara when we were in elementary school. We _____ each other for over twenty years.2. We _____ many new words since we started this course.3. That's a wonderful movie. I _____ it three times.4. Mr. and Mrs. Tonner _____ married for 10 years. 5. You are late! The class _____ already _____.6. Robert is my neighbor. He _____ next door to me for five years.7. Mary _____ several letters to her parents since she left home.8. We _____ in that restaurant several times.9. Our teacher _____ us a lot of help with the homework assignment.10. She _____ to her landlord many times about the broken window.11. We have a new camera. We _____ some beautiful pictures of the grandchildren.12. They _____ all their homework already.13. Mrs. Baxter _____ all her groceries for the week.14. Tommy _____ a bad cold for two weeks.15. Frank _____ for that company for many years.16. After three months of looking, she _____ a beautiful apartment to rent.

5. Choose the correct verb from the list below to complete the following sentences. Put the verb in the negative form.

fix / begin / arrive / be / see / stop / speak / buy / read / visit

1. Mathew is waiting on the corner for his girlfriend, but she _____ yet.
2. My brother lives in a different country. I _____ him for two years.
3. Ellie and Bill got a divorce five years ago. They _____ to each other since then.
4. It is only 8:45. The class _____ yet.
5. It started to snow last night and it still _____.
6. She has finally decided which car she wants, but she _____ it yet.
7. I heard that the movie at the Roxy Theater is great, but I _____ it yet.
8. I bought a newspaper today, but I still _____ it.
9. He took his car to the service station yesterday, but they _____ it yet.
10. The Andersons moved out of New York ten years ago and they _____ back to the city since then.

6. Match the questions on the left with the correct answer on the right.

1. Has he finished university yet?	A) No, he hasn't. He's still talking.
2. Have you eaten breakfast yet?	B) No, I haven't. My wife's still reading it.
3. Have they gotten married yet?	C) No, he hasn't graduated yet.
4. Has the president finished speaking yet?	D) No it hasn't. The teacher isn't here yet.
5. Has Mary watered the plants yet?	E) No, they haven't finished yet.
6. Has the doctor seen you yet?	F) No, they haven't. They're still engaged.
7. Has the sun come out yet?	G) No, she hasn't. They are still dry.
8. Have they finished their homework yet?	H) No, I haven't. I'll eat in a few minutes.
9. Has the class begun yet?	I) No, he hasn't. He is with another patient.
10. Have you read the paper yet?	J) No, it hasn't. It's still raining.

4. Retell the Topic: ENERGY EXCHANGE

TOPIC 2. ECOLOGICAL SITUATION IN UKRAINE

GRAMMAR: PAST PERFECT TENSE

Vocabulary

pollution	забруднення
reach a level	досягти рівня
heavy industry	важка промисловість
line the banks	стояти на берегах
nuclear power plants	ядерні електростанції
fiendish	недобрий
in the vicinity of	поблизу
poisonous discharges	отруйні викиди
decline, drop	падати
principal consumer	головний споживач
approximately	приблизно
power supplies	постачання запасів енергії
household	побутовий
hasard	ризик, хвороба
mine, pit	шахта
rob	грабувати
violation of the law	порушення закону
evil intention	злий намір

I. Translate the following text.



Ecological situation in Ukraine is qualified as a crisis due to the deformed structure of national economy with mining branches of production and energy and resource capacious technologies predominating, without building effective purifying stations.

Industrial pollution has reached a critical level in Ukraine. Heavy industry and chemical plants line the banks of large rivers such as the Dnieper, Siversky Donets, and Buh. Nuclear power plants, following some fiendish logic, are found in the vicinity of major cities, like giant water boilers.

While it is true that poisonous discharges in the atmosphere have dropped due to the economic decline, water and the ground present an altogether different picture.

Among the principal consumers of water are industry, agriculture, household, housing and municipal services. Industrial water is indigestible. The Green Party's attempt to draw public attention to the water situation is still in vain.

There are horrible projects that are totally unjustified ecologically, like transferring Dnieper water to the Danube. Fish is killed in the Dnieper with organic waste from nuclear and chemical plants. Hand skin abscess are an occupational hazard for fishermen of the Kakhovka water reservoir. Subterranean salty and dirty seas in place of closed pits, oil and gas boreholes fill drinking wells with salt water.

Cutting out forests businessmen are robbing the country of its valuable natural resource and undermining our ecology and climate. Neglecting fields resulted in half of the crops drying out. Misusing meadows, fields, and green city zones, building cottages there spoil the beauty of Ukraine. Forest fires because of people's carelessness or evil intentions burn out kilometres of our green lungs. Chemicals are spilt on the railways and the adjacent territory poisoning population and causing diseases. Chernobyl disaster took and is taking the lives of people. But even more terrible disaster is the uncontrolled economy brought about by political crisis and violations of the law.

2. Write whether these statements are true or false and give the correct variant.

1. Effective purifying stations are built.
2. Industrial pollution has reached a critical level in Ukraine.
3. Heavy industry and chemical plants are built far from large rivers.
4. Nuclear power plants are found in the vicinity of major cities, like giant water boilers.
5. Poisonous discharges in water and the ground have not dropped.
6. The Green Party's attempt to draw public attention to the water situation is very effective.
7. There are horrible projects that are totally unjustified ecologically.
8. Subterranean salty and dirty seas in place of closed pits, oil and gas boreholes fill drinking wells with salt water.

3. Match the synonyms.

1) contamination, atomic, situated, achieve, fall, measure, unclean, mine, construct, illness.

2) pit, pollution, level, disease, dirty, build, drop, found, nuclear, reach.

4. Translate the sentences paying attention to the introductory and connective words.

1. Ecological situation in Ukraine is qualified as a crisis. 2. Due to the deformed structure of national economy mining branches of production and energy and resource capacious technologies are predominating. 3. Ukraine developed industry without building effective purifying stations. 4. Nuclear power plants are like giant water boilers. 5. While poisonous discharges in the atmosphere have dropped with soil it is quite different. 6. Among the principal consumers of water are industry and agriculture 7. The Green Party's attempts to draw public attention to the water situation are but in vain. 8. Hand skin abscess are an occupational hazard for fishermen.

5. Translate the following sentences.

1. Екологічна ситуація в Україні може бути названа критичною. 2. Людям треба, щоб промисловість була нешкідлива для здоров'я. 3. Побудувавши заводи на берегах рік, люди спричиняють шкоду рікам. 4. Вода, використана заводами, непитна. 5. Відомо, що від отруйних викідів гине риба в ріках. 6. Промисловість, яка отруює атмосферу, має бути під контролем. 7. Нам всім слід контролювати чистоту своїх міст. 8. Вирубуючи ліси, будуючи котеджі на полях, люди знищують умови для свого життя.

GRAMMAR EXERCISES

Make past perfect simple 'yes / no' or 'wh' questions:

1. _____ (you / go) there before we went together?
2. _____ (she / see) the film already?
3. Why _____ (he / forgot) about the meeting?
4. _____ (it / be) cold all week?
5. _____ (I / read) the book before the class?
6. When she arrived, _____ (we / eat) already?
7. Where _____ (you / be) when I saw you?
8. _____ (they / travel) by bullet train before?

9. _____ (John / meet) Lucy before they went on holiday together?

10. _____ (you / do) your homework before I saw you? 11. Where _____ (she / work)? 12. _____ (I / pay) the bill before we left? 13. _____ (we / visit) my parents already that winter?

14. When you called, _____ (they / eat) dinner?

15. How _____ (he / manage) to fix the cooker?

16. _____ (my sister / be) sick for a long time?

17. How much _____ (she / study) before the exam?

18. What _____ (you / cook) for dinner that night?

19. When _____ (they / arrive)?

20. How many coffees _____ (she / drink) before the interview?

2. Choose the correct verb from the list below to complete the following sentences. Put the verb in the past perfect tense (had & past participle).

1. When I got to the house, Mary wasn't there. She _____ already _____.

2. I didn't recognize my old classmate because she _____ so much.

3. We were late for the show last night. By the time we got to the theater, the movie _____ already _____.

4. Yesterday I went on my first plane trip. I was very nervous because I _____ never _____ before.

5. I couldn't eat much dinner last night because I _____ such a big lunch. 6. I couldn't buy any groceries last night because when I got to the supermarket, it _____ already _____.

7. Last week our teacher gave back the essays we _____ the week before.

8. The house was quiet when Andrew got home. Everyone _____ to bed several hours earlier.

9. They got to school late yesterday. The bell _____ already _____.

10. Sheila couldn't come to my house last night because she _____ already _____ other plans.

11. We couldn't find the house. It was clear that he _____ us the wrong add address.

12. Annie didn't want to come to the movie with us because she _____ it the week before.

13. By the time the police arrived at the bank, the robber _____ already _____.

14. I couldn't get into my apartment when I came home from work last night because I _____ to take my key.

3. Complete the following sentences using the past perfect tense and the words provided.

Ex. I didn't meet Ellie for lunch because.... (she/eat) I didn't meet Ellie for lunch because she had already eaten.

1. My trip to New York was very exciting because..... (I/not be/before) _____

2. I couldn't see the doctor because..... (he/already/ leave the office) _____

3. I couldn't buy the car I wanted because..... (the car dealer/ already/ sell) _____

4. We couldn't see the new exhibit because..... (the museum/already/close) _____

4. Complete the following sentences in the past perfect simple tense.

1) She _____ (to write) six letters before she got a response. 2) It _____ always _____ (to snow) here before 1978. 3) Dan _____ (to be) sick for three days before he got better. 4) Li and Susan _____ (to try) four times before they gave up. 5) My father's old car _____ (to run) very well before he sold it. 6) We _____ not _____ (to take) the test before. 7) My uncle _____ (to visit) China several times in the past, so this visit was nothing new. 8) Our father _____ never _____ (to drive) to California. 9) I _____ (to speak) to the president twice before, so I was not that nervous. 10) The old man _____ occasionally _____ (to need) help crossing the street.

6. Retell the Topic: ECOLOGICAL SITUATION IN UKRAINE

TOPIC 3. DEPLETION OF THE OZONE LAYER

GRAMMAR: FUTURE PERFECT TENSE

Vocabulary

depletion	витощення
ozone layer	озоновий шар
thin band	тонка стрічка
upper part	верхня частина
services to shield	слугує для захисту
harmful rays	шкідливі промені
discover	відкривати
refrigeration	заморожування
cleaning solvent	очищаючий розчинник
in turn	в свою чергу
break down	розділювати
affected by its interaction	під впливом взаємодії
amount	кількість
consequences	наслідки
skin cancer	рак шкіри
respond to infection	реагувати на інфекцію
additionally	в додаток
the growth rates	швидкість росту
immediately ban	негайно заборонити
release	вивільняти
suggest	вважати

I. Translate the following text.



The ozone layer, a thin band in the stratosphere, the upper part of the atmosphere, services to shield the Earth from the sun's harmful ultraviolet rays. In the 1970's, scientists discovered that the layer was being attacked by chlorofluorocarbons (CFCs), chemicals used in refrigeration, air-conditioning systems, cleaning solvents, and aerosol sprays. CFCs release chlorine into the atmosphere; chlorine, in turn, breaks ozone down

into its constituent parts of oxygen. Because chlorine is not affected by its interaction with ozone, each chlorine molecule has the ability to destroy a large amount of ozone for an extended period of time.

As a result of the ozone layer depletion the ozone concentration became to reduce in some places, in particular, over Antharctide continent, where a pulsing hole often appears with ozone content less by 40-50%. At present the ozone hole reaches the area of Antharctide continent. The ozone hole is found also in the Southern hemisphere over Antharctic continent. The process of the ozone diminishing is constantly going on.

The consequences of the depletion of the ozone layer are dramatic. Sputnics register high rates of ultraviolet radiation growth. Due to the ozone hole the high ultraviolet radiation is observed in the countries of the Southern hemisphere of the Earth. Increased ultraviolet radiation will lead to growing number of skin cancers and cataracts and also reduce the ability of people's immune system to respond to infection. Additionally, the growth rates of the world's oceanic plankton, the base of all marine food chain will be negatively affected, perhaps leading to increased atmospheric carbon dioxide and thus to global warming. Even if the use of CFCs was immediately banned, the chlorine already released into the atmosphere would continue to destroy the ozone layer for many decades. Additionally the latest studies suggested that global warming may increase the amount of ozone destroyed.

2. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.

harm, refrigerate, dissolve, constant, grow, radiate, able, negative, atmosphere, globe.

3. Fill in the missing words. Copy and translate the sentences.

depletion, layer, hole, affected, to prevent, harmful, discovered, release.

The ozone _____ services to shield the Earth from the sun's rays. The sun's ultraviolet radiation is _____ to people. Scientists _____ that the layer was being attacked by chloroflu-orocarbons. CFCs _____ chlorine into the atmosphere. Chlorine is not _____

by its interaction with ozone. The ozone layer ____ is observed. Over Antharctide continent a pulsing ozone ____ often appears. It is necessary ____ the further depletion of the ozone layer.

4. Translate the following sentences into English.

1. Вчений ____ сказав, що супутники реєструють зростаючий рівень ультрафіолетової радіації. 2. Хтось може щось зробити для збереження озону в атмосфері? 3. Створивши багато хімічних речовин, люди не подумали про своє здоров'я. 4. Стало відомим, що озоновий шар потоншав. 5. Всі мусять оберігати природу як себе самих. 6. Зменшуючи концентрацію озону, люди скорочують своє життя. 7. Вченими доведено, що фреон, застосований у холодильниках, руйнує озон. 8. Нам слід вживати якісь природні речовини у домашньому господарстві (at home).

GRAMMAR EXERCISES

1. Read the conversation and choose the correct word in italics.

1 A Shall we go out this evening?

B OK, but only after seven. I (1) *won't have / won't* finished my homework until then.

A That's OK. I'm working on my project this evening but I'll (2) *done / have done* most of it by seven-thirty, so I can phone you then.

2 A Carol's lost a lot of weight!

B Yes, she's been on a very good diet. By next week she'll have been (3) *go / going* to a weight loss class for over six weeks! If she carries on like this she'll (4) *have / has* lost over five kilos by the end of the months.

3 A Will you (5) *have / been* finished plastering this room by the weekend?

B Yes. I hope so.

A Great. So will we be able to paint the room on Monday?

B Wait until Wednesday. The new plaster (6) *didn't try / won't have dried* until then.

4 A Excuse me, nurse. I've been waiting here for ages.

B I'm sorry. The doctor's very busy. She'll probably be able to see you after four.

A And by then I'll (7) *be / have been* waiting here for more than six hours!

1. Complete the sentences with the verb in brackets. Use the future perfect or, where possible, the future perfect continuous form.

1 By the end of next month I'll *have been living* here in Spain for six years. (live)

2 I'll ask Jane to call you back at twelve. Her meetingby then. (end)

3 When he retires next year, Adam here for more than twenty years. (work)

4 I'll have more free time after September because the children to school by then.

(go back)

5 My best friend is doing a 'round-the-world' trip. By this time next week she for

more than six months. (travel)

6 Don't worry. By the time you get here, my mother-in-law ! (leave)

7the project in time for the meeting? (the team, complete)

8 It's really long flight. We in the same seats for over fourteen hours

so we'll be exhausted when we get there. (sit)

9 You can't stay here next week. Wethe decorating. (not finish)

2. *Find five mistakes in the letter and correct them.*

Dear Mr. Sanderson

I am writing about the repairs which your company has been made to the roof of our apartment building. The work started in March and it still isn't finished. By the end of this week the men will have working on the roof for over two months. These means we will suffered more than eight weeks of continuous noise and disruption, and we will be living for all that time with permanent cold draughts and dirt.

As you know, my wife is pregnant and the baby is due next month. It looks as though the work will haven't been completed by the time the baby is born. This is unacceptable.

I would like you to reassure us that work on the part of the roof that covers our flat will have finishing by the beginning of June at the latest. I think this is the least we can expect.

Yours sincerely,
Jeremy Brogan

5. Retell the Topic: DEPLETION OF THE OZONE LAYER

TOPIC 4. AIR POLLUTION

GRAMMAR: PASSIVE FORMS

Vocabulary

air pollution	забруднення повітря
harmful	шкідливий
appearance	вигляд
supersonic jet airliner	надзвуковий реактивний літак
throw out	викидати
decide	вирішувати
space flight	космічний політ
break through	прориватися крізь
envelope	обгортати
significant	значний
based on burning	заснований на спалюванні
common	звичайний
dangerous way	небезпечний засіб
smog – smoke + fog	чорний туман
cause health problems	викликати проблеми здоров'я
precipitation	осад
form acid rain.	утворювати кислотний дощ
capable of surviving	здатні вижити
acidic conditions	кислотні умови
wind	вітер
fall	падати
support	підтримувати

I. Translate the following text.



When something harmful is added to the environment, it causes the pollution. As a result of the antropogenic activity atmosphere pollution happens, which results in changes in atmosphere air chemical composition. The appearance of the supersonic jet airliners has presented many problems. These airliners use up

tones of oxygen and throw out over 150,000 tons of water vapor into the stratosphere every day, increasing the temperature. It has to be decided if this is right in ecological terms. Space flights that break through the atmosphere envelope should be studied as to their effects on nature. A significant portion of industry and transportation is based on burning fossil fuels, such as gasoline. As these fuels are burned, chemicals and particulate matter are released into the atmosphere.

The most common substances which pollute the air contain carbon, sulfur and nitrogen. These chemicals interact with one another and with ultraviolet radiation in sunlight in various dangerous ways. Smog, usually found in urban areas with large numbers of automobiles, is formed when nitrogen dioxide is broken down by sunlight, releasing ozone and other harmful substances. Smog can cause serious health problems. When sulfur dioxide and nitrous oxide are transformed into sulfuric acid and nitric acid in the atmosphere and come back on earth in precipitation, they form acid rain.

Air pollutions are classified as organized and nonorganized, heated and cold, principal or supplementary production, unpurified and purified wastes.

Acid rain. Acid rain is a serious global problem because few species are capable of surviving in the face of such acidic conditions. It comes from industrial countries, but wind carries it and a lot of falls on these countries' neighbors. Acid rain is a type of pollution which may take the form of snow, fog, or a dry form of precipitation and they can be carried long distances from the source before they are deposited. Acid rain has made numerous lakes so acidic that they no longer support fish populations. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide.

2. Write whether these statements are true or false and give the correct variant.

1. Atmosphere pollution happens because of hurricanes.
2. Pollution results in changing chemical composition of the air.
3. Transportation is based on burning fossil fuels, such as hydrogen.
4. Carbon, sulfur and nitrogen interact in various safe ways.
5. Smog, is rarely found in urban areas
6. Sulfur dioxide and

nitrous oxide are transformed into sulfuric acid and nitric acid in the atmosphere. 7. Precipitation may fall on the ground as acid rain or snow. 8. Waste can not be purified.

3. Match the synonyms.

1) contamination, precipitate, set free, solve, ecology, gasoline, remove, split, convert, return.

2) release, decide, environment, transform, pollution, fuel, throw out, come back, throw down, break down.

4. Translate the following sentences.

1. We are to start an urgent campaign in order to preserve environment. 2. We know many pressure and interest groups to be searching for the solution to the problem of pollution. 4. Atmospheric pollution is considered to have been the result of the anthropogenic activity. 3. To start a program of emergency conservation measures will decrease pollution. 5. The continental pollution is said to destroy the human habitat. 6. Sulfur dioxide and nitrous oxide in the atmosphere come back on earth in precipitation to form acid rain. 7. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide. 8. To have made his discoveries Darwin observed nature.

5. Translate the following sentences.

1. Something harmful being added to the environment, it causes the pollution. 2. Atmosphere pollution is said to result in changes in air chemical composition. 3. The airliners using up tones of oxygen, their appearance has presented many problems. 4. The airliners throwing out over 150,000 tons of water vapor into the stratosphere every day, it increases the temperature. 5. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide. 6. When removed the wastes were analysed for toxic substances. 7. Everybody knows smog to cause serious health problems. 8. For ultraviolet radiation not to be so dangerous the air should not be contaminated with chemicals.

6. Translate the following sentences into English.

1. Чому ми повинні дихати забрудненим повітрям? 2. Відомо, що кислі дощі розносяться вітром до інших країн. 3. Літаки – швидкий вид транспорту, але вони споживають багато кисню і викидають водяну пару. 4. Є причини турбуватися про майбутнє, і вони дуже серйозні. 5. Минулі покоління не дуже думали про те, яку екологію вони нам залишать. 6. Необхідно, щоб діти мали екологічну практику у школі. 7. Оскільки сірка, азот та вуглець є найбільшими забруднювачами повітря, необхідно зменшити їх викиди у атмосферу. 8. Вважають, що кислотні дощі є причиною зубожіння лісових екосистем.

GRAMMAR EXERCISES

1. Complete the second sentence so it means the same as the first, using passive forms.

0 They were painting that wall yesterday.	That wall <i>was being painted yesterday.</i>
1 We've turned off the lights.	The lights
2 We will send you an email tomorrow.	You
3 They aren't making that model any more.	That model
4 Do I have to fill in this form?	Does this form
5 They haven't repaired your computer yet.	Your computer
6 They're going to close the road for 24 hours.	The road

2. Complete the sentences, using passive forms of the verbs in the box.

build count decorate finish repair wash

0 This house <i>is being</i> 3 The roof needs <i>decorated.</i>
1 The votes 4 The bridge next .	year.
2 This castle in 5 The dishes 1250. yet.

3. Use the information in the email to complete the sentences below.

Hi Hilary

I'm so pleased that you can come to our wedding! Jake and I have planned everything over the last few weeks. At the moment we're sending out all the final invitations. (Don't worry, I haven't invited Jane Anderson. I know you get on with her!) I was a bit worried about the cost but last month Mum and Dad agreed to pay for the reception. They paid the deposit last week. That was a relief! Have you decided what to wear yet? I've bought my wedding dress (It's a bit big so I have to alter it). The shop had reduced the price so it was only a few hundred pounds.

Do you remember Aunt Terri? Apparently she's got a fantastic new video camera, so she is going to film the ceremony. We've got a professional photographer as well. She'll take the formal photos. And Antonio from the Italian restaurant is doing the catering, so the food should be great! I can't wait to see you there. It's going to be a great day!

Lucy

0 Everything*has been planned*..... by Jake and Lucy.

1 The final invitations at the moment.

2 Jane Anderson to the wedding.

3 The deposit for the reception last week.

4 Lucy has bought her wedding dress but it has

5 The price of the dress by the shop.

6 The ceremony By Lucy's aunt.

7 The formal photos by professional photographer.

8 The catering by Antonio.

4. Choose the best word in italics. Sometimes both are grammatically correct, but one answer is more suitable.

HOW IS PAPER MADE

Everyone enjoys fashion magazines and newspapers. But have you ever thought about how the paper (1) *we print them / they are printed* on is made?

Most paper is (2) *made / making* from wood. First, (3) *they cut the wood / the wood is cut* into small pieces. These (4) *mix / are mixed* with water and heated to produce a kind of thick paste. Then chemicals (5) *we add them / are added* to clean the paste and make it white. Next the paste is spread on a screen and (6) *dried / is dried*. The water drains away or evaporates and (7) *are left / leaves* a thick layer of paper. (8) *We then pass this / This is then passed* between two large rollers (circular machines) to make it thinner and flatter.

(9) *The paper can then be cut / They can then cut the paper* into the correct sizes.

4. Three more of these paragraphs would be improved if the second sentence used a passive form. Decide which paragraphs they are and rewrite the second sentence.

5. 0 Philip Green bought the famous British clothes store, Moss Bros, in 2008. Because they ran out of money, the original owners sold it.

It was sold by the original owners because they ran out of money.

1 Live aid was the most successful fund-raising event of the 1980s. A group of well-known British and American musicians organized it in July 1985.

.....
....
.....
....

2 The Laurentian Library in Florence is one of the greatest buildings of the Italian Renaissance. Michelangelo designed it in the 1520s.

.....
....
.....
....

3 Jeans first became popular when they were worn by film stars and singers in the 1950s. Elvis Presley and James Dean were the two stars who had the most influence on young people's fashion at that time.

.....
....
.....
....

4 In recent years several high street stores have started selling copies of designer jeans. People who can't afford to buy real designer clothes often buy them.

.....
....
.....
....

6. Rewrite these sentences so they are true for you. Change the underlined part.

0 My watch was made in Austria.	<i>My watch was made in Switzerland.</i>
1 My school was built in the 1960s.
2 My old photos are stored in the garage.
3 My favourite shirt is made of nylon.
4 My hair is usually cut by my mother.
5 I don't like food that has been fried.

7. Retell the Topic: AIR POLLUTION

TOPIC 5. WATER POLLUTION

GRAMMAR: MODAL VERBS

Vocabulary

lack	відсутність
death	смерть
disease	хвороба
fertilizer	добриво
land	земля, країна
to cover	покривати
coastal	узбережжний
beach	пляж
sewage	рідкі відходи
wild	дикий
to suffer	страждати
acute	гострий
proved to be	виявився
undrinkable	непитна
renewable	відновлена
manage	тут змогти
provide forever	забезпечити назавжди
generation	покоління

I. Translate the following text.



Water is a structural component of our body, as well as all organisms of the biosphere. In their relation to water all branches of economy are divided into users and consumers. The former use water as media without taking it out of the source (water transport, hydropower plants) which the latter do for drinking, cooking, etc.

Water problem acquired global international scale. In our days water is an item of international trade. Industrial enterprises use water in large quantities.

The greatest consumers of water are chemical plants, cellulose-paper mills and enterprises of non-ferrous metallurgy. The rate of pollution of sweet water basins is high. At present over 90 mln tons of mineral fertilizers and more than 2 mln tons of toxic chemicals are spread in water basins. Oceans and seas are sewage collectors poisoned with radioactive wastes. Statistics says that nearly 1.5 billion people lack safe drinking



water and that at least 5 million deaths per year can be attributed to waterborne diseases.

With almost 80 percent of the planet covered by oceans, most coastal waters are now polluted. Beaches around the world are closed regularly, often because

of high amounts of bacteria from sewage disposal, and marine wild life is beginning to suffer. Since the middle of the nineteenth century there has been a continual development of our knowledge of the effects of pollution and the means by which it may be prevented or controlled. The problem has become especially acute in the second half of the twentieth century when in the USA water in a number of lakes and rivers proved to be already undrinkable. The living resources of the sea are renewable. If managed rationally they could provide food and materials probably forever. The only way to overcome the catastrophe of water pollution is to put an ocean to a greater international control. The territorial waters should come under a new ocean regime. Under this regime the mineral and other resources of the ocean would become reserves and could be used by following generations.

2. Write whether these statements are true or false and give the correct variant.

1. Users take water out of the source.
2. Water purity is a problem of international importance.
3. In our days water is not an item of international trade.
4. The rate of pollution of sweet water basins is low.
5. Mineral fertilizers are thrown in water.
6. Safe drinking water is a problem in few countries.
7. Much water in a number

of lakes and rivers proved to be already undrinkable. 8. The living resources of the sea are not renewable.

3. Match the synonyms.

1) illness, contamination, comprise, quantity, permanent, influence, ways, supply, enterprise, disaster. 2) amount, include, means, plant, constant, provide, pollution, catastrophe, effect, disease.

4. Translate the following sentences.

1. At least 5 million deaths per year can be attributed to waterborne diseases. 2. Pollution may be prevented or controlled. 3. The only way to overcome the catastrophe of water pollution is to put an ocean to a greater international control. 4. The territory was disinfected to decrease radiation. 5. To have solved a chemical problem meant to write the formula of a chemical reaction. 6. The scientists study the means by which pollution may be prevented or controlled. 6. He asked me to send them the contract by mail 7. To produce chemicals or paper plants have to consume much water. 8. Sweet water is known to be the only water to drink (drinkable water).

5. Translate the sentences paying attention to the introductory and connective words.

1. You know that English has a long history. 2. Since early times the first inhabitants of Great Britain were the Celts. 3. The Romans who first occupied Great Britain left roads and fortresses with Roman names. 4. The German tribes of Angles, Saxons and Jutes were the founders both of the English nation and the English language. 5. The land on which they settled was called England and the language they spoke English. 6. After the Norman conquest Great Britain fell under William the Conqueror. 7. Though the Normans became the masters and the English their slaves, the English didn't want to speak the language which the Normans spoke. 8. So the Anglo-Saxon language changed a little by the Normans became the real English, language.

6. Translate the following sentences into English.

1. Оскільки вода є одним із основних компонентів нашого організму, вона необхідна нам кожного дня. 2. Можна сказати, що вода є життя. 3. Для користувачів вода є тільки середовищем, тоді як споживачі потребують її для пиття, приготування їжі, ін. 4. Давно відомо, що мільйони людей мають потребу у питній воді. 5. Нам необхідно мати чисту питну воду. 6. Коли вода забруднена, виникають хвороби. 7. Харчові підприємства використовують воду для того, щоб переробляти їжу. 8. Екологи домовилися, що водні ресурси будуть взяті під міжнародний контроль.

GRAMMAR EXERCISES

1. Complete the sentences. Use must + these verbs:

be eat go learn meet wash win

1. I'm very hungry. I must eat something.
2. Marilyn is a very interesting person. You _____ her.
3. My hands are dirty. I _____ them.
4. You _____ to drive. It will be very useful.
5. I _____ to the post office. I need some stamps.
6. The game tomorrow is very important to us. We _____.
7. You can't always have things immediately. You _____ patient.

a. Write I must or I had to.

1. I had to walk home last night. There were no buses.
2. It's late. _____ go now.
3. I don't usually work on Saturdays, but last Saturday _____ work.
4. _____ get up early tomorrow. I've got a lot to do.
5. I went to London by train last week. The train was full and _____ stand all the way.
6. I was nearly late for my appointment this morning. _____ run to get there on time.
7. I forgot to phone David yesterday. _____ phone him later today.

b. Complete the sentences. Use mustn't or don't need to + one of these verbs:

forget go hurry lose phone wait

1. I don't need to go home yet. I can stay a little longer.
2. We have a lot of time. We _____.
3. Keep these papers in a safe place. You _____ them.
4. I'm not ready yet, but you _____ for me. You can go now and I'll come later.
5. We _____ to turn off the lights before we leave.
6. I must contact David, but I _____ him. I can send him an email.

2. Write don't need to / had to / must / must / mustn't.

MUM: Come on, Alice. You _____ hurry up.

ALICE: I'm ready. I _____ phone Jamie, and he talked and talked. That's why I'm a bit late.

MUM: Let's go. The train leaves in 20 minutes.

ALICE: Just a minute. Where's my umbrella?

MUM: You _____ take that. It's a beautiful day.

ALICE: OK. So where's my sun hat? I _____ forget that.

MUM: Alice, we _____ leave NOW.

3. Write must / mustn't / had to / don't need to.

1. You don't need to go. You can stay here if you want.
2. It's a fantastic film. You must see it.
3. The restaurant won't be busy tonight. We _____ reserve a table.
4. I was very busy last week. I _____ work every evening.
5. I want to know what happened. You _____ tell me.
6. You _____ tell Sue what happened. I don't want her to know.
7. I _____ hurry or I'll be late.
8. "Why were you so late?" "I _____ wait half an hour for a bus".
9. We _____ decide now. We can decide later.

10. It's Liza's birthday next week. I _____ forget to buy her a present.

2. Complete the sentences. Use have to or has to + these verbs:

do hit read speak travel wear

1. My eyes are not very good. I _____ glasses.

2. At the end of the course all the students _____ a test.

3. Sarah is studying literature. She _____ a lot of books.

4. Albert doesn't understand much English. You _____ very slowly to him.

5. Kate is not often at home. She _____ a lot in her job.

6. In tennis you _____ the ball over the net.

3. Complete the sentences. Use have to or had to + these verbs:

answer buy change go walk

1. We _____ home last night. There were no buses.

2. It's late. I _____ now. I'll see you tomorrow.

3. I went to the supermarket after work yesterday. I _____ some food.

4. This train doesn't go all the way to London. You _____ at Bristol.

5. We did an exam yesterday. We _____ six questions out of ten.

4. Complete the questions. Some are present and some are past.

1. I have to get up early tomorrow.

What time do you have to get up?

2. George had to wait a long time.

How long _____?

3. Liz has to go somewhere.

Where _____?

4. We had to pay a lot of money.

How much _____?

5. I have to do some work.

What exactly _____?

5. Write I have to in the correct verb form.

Jessica is a young tennis star. She _____ practice most days before school. She goes *to the gym a lot too, but she thinks that is a bit boring. Sometimes she says to her coach, “You know I hate the gym. _____ do my exercises today?*

Jessica's father was a professional tennis player, but in those days players _____ **practice so much. He's a bit worried about Jessica and asks her mother,** “How long _____ play every morning?” “About 90 minutes. She _____ do it if she doesn't want to, but she loves it. And I'm afraid, nowadays, you _____ practice if you want to be the best.”

6. Write can / can't / could / couldn't.

1. I _____ easily carry this trunk to the station.
2. He said that he _____ ship the goods in September.
3. When he was young, he _____ run a mile in less than five minutes.
4. He _____ have done it, it is very unlike him.
5. Why did you stop at a hotel? You _____ have spent the night at my house.
6. I said that he _____ have miss the train, as he have left the house very early.
7. If I had received his letter last week, I _____ have helped him.

7. Write may / might.

1. You _____ take any book you like.
2. She told him that he _____ go home.
3. He _____ come tonight, but I'm not sure.
4. I gave him the text-book so that he _____ learn his lesson.
5. I said that he was not in the house, but he _____ be in the garden.
6. I _____ come and see you next summer, but my plans are not fixed.
7. _____ I have another cup of tea?

8. Complete the sentences. Use you should + one of these verbs:

eat go take visit watch wear

1. When you play tennis, _____ the ball.
2. It's late and you're very tired. _____ to bed.
3. _____ plenty of fruit and vegetables.
4. If you have time, _____ the Science Museum. It's very interesting.
5. When you're driving, _____ a seat belt.
6. It's too far to walk from here to the station. _____ a taxi.

9. Write sentences with I think ... should and I don't think ... should.

1. We have to get up early tomorrow. (go home now) I think we should go home now.
2. That coat is too big for you. (buy it) I don't think you should buy it.
3. You don't need your car. (sell it) _____.
4. Karen needs a rest. (have a holiday) _____.
5. Sally and Dan are too young. (get married) _____.
6. You are not well this morning. (go to work) _____.
7. James isn't well today. (go to the doctor) _____.
8. The hotel is too expensive for us. (stay there) _____.

10. Match the sentence endings to the beginnings.

*shouldn't spend too much money
should do yoga
should read it
should sit on it
should turn your phone off
should buy them
shouldn't eat so many cakes*

1. David has a bad back, so I think he _____.
2. This book is fantastic. You _____.
3. When you're in the cinema, you _____.
4. These boots are fantastic! I think you _____.
5. If you want to stay thin, you _____.

6. That chair isn't very strong, so I don't think you ____.

7. It's a beautiful ring, but you ____.

11. Paraphrase the following sentences referring them to the future and to the past:

1. I can speak German very well.

2. You may watch television and listen to the radio in the evening.

3. You must learn to play a musical instrument.

4. She must bake a cake today.

5. You must learn foreign languages.

6. They should remind her of the excursion.

7. I can play football very well.

8. She can play badminton in the open air.

12. Write can / may / must / should / ought.

1. I ____ ski very well.

2. ____ he play the violin?

3. My sister ____ cook very well.

4. You ____ visit your friends.

5. She ____ see this performance.

6. You ____ visit the countryside.

7. You ____ learn to play the guitar.

8. You ____ watch outdoor sports.

7. Retell the Topic: WATER POLLUTION

TOPIC 6. WASTES

GRAMMAR: INFINITIVE

Vocabulary

wastes	відходи
storage	зберігання
processing	переробка
to degrade	розкладатися
to undergo	підлягати
to haul	перевозити
gully	водостічна канава
abandoned	покинутий
pit	яма, шахта
deterioration	погіршення
dumping site	ділянка поховання відходів

I. Translate the following text.



Ecology contamination may be qualified as entering or appearing in environment new, untypical chemical or biological substances harmfully influencing natural ecosystems and man, of which nature is unable to get rid by selfpurification. These substances are called contaminants or pollutants.

Contaminants as foreign substances are classified quantitatively and qualitatively, as to influence on populations, etc.



Dry land is termed as lithosphere which takes 29,2% of the Earth and includes soils and natural resources both on the surface and in the depths. Lithosphere contamination occurs in natural way as a result of natural disasters, as well as through anthropogenic activities. Wastes formed by the

anthropogenic activities are divided in three categories: industrial, agricultural and domestic.

Modern technology helps us to live longer and more comfortable lives. Our homes are warm in winter, cool in summer. We eat foods from all over the world.

Doctors save us from death with new drugs. Chemicals help to stop diseases, make crops grow faster, clean our drinking water, and make our engines run. Chemical plants make the things we need to survive. They provide jobs for thousands of workers. But there is a "down" side of modern technology: chemicals that save our lives can also kill us. The chemicals used to make such useful things as plastics, pesticides, even paper and cloth, can be harmful or toxic.

Once the product is made, the leftover chemicals are thrown away. If not disposed of properly, the wastes can poison people and kill off trees, plants and animals. Waste disposal is the collection, storage and processing of waste materials. In nature, wastes are for the most part returned to the environment through chemical action, bacterial activity, and weather. Some man-made waste are also processed, or degraded, by these natural processes. However, many of the wastes of an industrial society are not readily degraded and absorbed into the environment and must undergo special processing.

2. Write whether these statements are true or false and give the correct variant.

1. Contaminants are chemical or biological substances. 2. Nature is able to get rid of contaminants by selfpurification. 3. Natural resources both of the land and sea are contaminated by natural disasters. 4. Industrial, agricultural and domestic wastes are the products of anthropogenic activities. 5. Creating comfortable life we think of nature. 6. Waste disposal is the collection and storing of waste materials. 7. All wastes are readily degrading. 8. Wastes processing is adequate.

3. Match the synonyms.

1) medicine, harvest, quicker, purify, leftover, treat, decompose, accumulate, artificial, poison.

2) waste, disintegrate, contaminant, crop, unnatural, gather, drug, faster, process, clean.

4. Copy and translate the sentences paying attention to the introductory and connective words.

1. Chemicals are used to make such useful things as plastics pesticides, even paper and cloth. 2. Since chemicals can be harmful or toxic their use is limited. 3. As for lithosphere contamination, it occurs in natural way as well as through anthropogenic activity. 4. Once the product is made, the leftover chemicals are thrown away. 5. If not disposed of properly, the wastes can poison people. 6. Chemical plants provide jobs for thousands of workers. 6. Some man-made waste are also processed, or degraded, by natural processes. 7. However, many of the wastes of an industrial society are not readily degraded. 8. Both animals and people suffer from pollution.

5. Translate the following sentences into English.

1. Забруднення навколишнього середовища – це поява в ньому нетипових біологічних чи хімічних субстанцій, а природа невзмозі позбавитися їх. 2. Кажуть, що надприродні субстанції впливають на екосистему і людину. 3. Відомо, що антропогенна діяльність завжди впливала на людину та природу. 4. Оскільки люди хочуть жити комфортно, вони розвивають техніку та технології. 5. Для того, щоб вони жили комфортно, створюються матеріали, ліки, будинки, ін. 6. Заводи потрібні, щоб люди працювали. 8. Будуючи нові заводи, підприємці будуть думати про екологію. 8. Багато треба зробити для забрудненої природи.

GRAMMAR EXERCISES

1. Write the words in brackets in the correct forms either to infinitives or gerund in English.

Did you remember (call) your husband?

I don't remember (give) you permission to use my car.

I stopped (get) some petrol on my way home from work.

I wish the children would stop (make) so much noise.

My hair needs (cut) .

Oh no! I think I have forgotten (lock) the door.

She always forgets (close) the fridge.

She told me that she regrets (shout) at you yesterday.

The child will not stop (cry) . I guess he needs (feed) .

We regret (inform) you that we cannot offer you the job.

2. Use the verbs from the box to complete these sentences.

Arrive survive be work renovate contact answer talk

I asked him several times but he didn't bother my question.
Finally, we agreed on the project together. I demand to your boss. Jack usually fails on time. Domestic animals somehow managed the fire. We're not planning the hotel much longer. If you have any questions, don't hesitate me. Was she just pretending your friend?

3. Use the nouns and the verbs in brackets to complete these sentences.

Example: Our parents allowed out tonight. (we - go)

Our parents allowed us to go out tonight.

These glasses will enable (she - read)

My uncle advised architecture. (I - not study)

Our teacher encouraged in the competition. (we - take part)

They persuaded the army. (she - not join)

We are training blind people. (they - help)

The policeman forced down. (he - lie)

My mum always reminds late for school. (I - not be)

The traffic warden warned on double yellow lines. (we - not park)

6. Retell the Topic: WASTES

TEST

1. Complete the text with the correct forms of the words in brackets

What Causes Global Warming?

Scientists have (25) _____ (spend/spent) decades figuring out what is causing global warming. They've looked at the natural cycles and events that are known to influence climate. But the amount and pattern of warming that's been measured can't be explained by (26) _____ (this/these) factors alone. The only way to explain the pattern is to include the effect of greenhouse gases emitted by humans. The United Nations formed a group of (27) _____ (scientist/scientists) called the International Panel on Climate Change, or IPCC. The IPCC (28) _____ (meet/meets) every few years to review the latest scientific findings and write a report summarizing all that is (29) _____ (know/known) about global warming. One of the (30) _____ (one/first) things scientists learned is that there are several greenhouse gases responsible for warming, and humans emit them in a variety of ways. Most come from the combustion of fossil fuels in cars, factories and electricity production. The gas responsible for the most warming is carbon dioxide, also (31) _____ (called/calling) CO₂. Different greenhouse gases have different heat-trapping abilities. Some of (32) _____ (their/them) can even trap more heat than CO₂. A molecule of methane produces more than 20 times the warming of a molecule of CO₂. Nitrous oxide is 300 times more powerful than CO₂. Other gases, such as chlorofluorocarbons, have heat-trapping potential thousands of times (33) _____ (greater/greatest) than CO₂. But none of these gases (34) _____ (adds/added) as much warmth to the atmosphere as CO₂ does. The planet is warming from North Pole to South Pole. And the effects of rising temperatures aren't (35) _____ (waiting/waits) for some far-flung future. They are (36) _____ (happening/happenes) right now. The heat is not only melting glaciers and sea ice it's also shifting precipitation patterns and setting animals on the move.

2. Read the text "What Causes Global Warming?" again and choose the right variant of the answers.

1. The amount and pattern of warming that's been measured...

- (A) can't be explained by scientists so far.
- (B) can be explained by the natural cycles and events that are known to influence climate.
- (C) are figured out and explained.
- (D) are enormously great.

2. The gas responsible for the most warming is called...

- (A) methane
- (B) oxygen
- (C) nitrous oxide
- (D) carbon dioxide, or CO₂

3. Heat-trapping abilities of most greenhouse gases ... EXCEPT

- (A) are absolutely identical
- (B) are different
- (C) are not the same
- (D) differ

4. The International Panel on Climate Change writes a report

- (A) summarizing all that is known about global warming.
- (B) showing the work of the organization for the given period.
- (C) reviewing the latest scientific findings.
- (D) giving some recommendations concerning future actions directed to prevent further warming.

3. *Write the annotation to the text “What Causes Global Warming?”*

SELF STUDY

TOPIC 1. WHAT CAN WE DO?

I. Translate the following text.

The state of the Earth affects all of us. Each person can help by putting the world first when making every day choices.

Recycling glass, metals, plastics, and paper reuses natural resources. Buying products with less packaging also saves resources. Energy can be saved by insulating houses and by turning off lights when they are not needed. Using bicycles or mass transportation instead of cars saves energy and reduces exhaust emissions. Electric transport – tramways, trolley-buses, metro proved long ago to be the best transport that satisfies all our needs as for reliability, speed, and clean air. So these kinds of transport are believed to be the most prospective and are being developed at fast rates. Renewable energy could be used more; it has added benefit of not creating waste products that add to pollution.

Pollution can be reduced by controlling the use of pesticides and fertilizers in farming. Insect repelling plants – natural as well as transgenic serve a good service to a man in saving and increasing crops, fruits and vegetables harvests. The dumping of radioactive waste, chemicals, and sewage into the oceans can also be prevented.

Swamps and lakes irrigation for human purposes dry out the soil, destroying water balance. On the other hand the arable lands are not watered enough with the result of the crops perishing from droughts. Developing watering systems would help both the soil and people depending on it.

If the human population keeps growing, the Earth will not be able to feed everyone unless wild life and their habitats are sacrificed. If population growth were to slow down, however, habitat destruction, including deforestation, might be halted. Careful planning could prevent urban areas from overrunning natural habitats. Individuals can help endangered species in general by following all the guidelines above. They can also help by not buying specific items made from endangered species.

These include decorative coral, which is gathered by dynamiting coral reefs, and ivory, which comes from elephants killed for their tusks.

Vocabulary

state	стан
affect	впливати
put the world first	ставити світ на перше місце
recycling	переробка
insulate	ізолювати
exhaust emissions	вихлопи
wildlife	дика природа
sacrifice	жертвувати
slow down	уповільнювати
halt deforestation	зупинити знищення лісів
careful	обережний
urban area	міська територія
overrun	переповнювати
natural habitat	природне середовище
the guidelines above	названі вище вказівки
item	річ
ivory	слонова кістка
elephant tusks	бивні слона

II. Write the main idea of the text.

III. Match the notions and their definitions.

- 1) packaging, recycling, exhaust, save, prevent.
- 2) method used in manufacture or industry; stop or hinder; make or keep safe; product covering; make empty and leave, use up completely.

IV. Copy and translate the following sentences. Define the form and function of the Gerund.

1. Glass, metals, plastics, and paper being recycled reuses natural resources.
2. Having bought products with less packaging also saved resources.
3. Energy can be saved by insulating houses and by turning off lights when they are not needed.
4. Using bicycles or mass transportation instead of cars saves energy and reduces exhaust emissions.
5. No waste products being created is an added benefit of renewable energysources.
6. If the human population keeps growing, the Earth will not be

able to feed everyone. 7. Careful planning could prevent natural habitats from being overrun. 8. Having dynamited coral reefs destroyed the natural habitat of sea fauna.

V. Replace the Infinitive with the Gerund. Write down and translate the sentences.

1. To save energy helps our economy. 2. To have turned off light saved energy. 3. To go on foot is healthy and economical. 4. To have created waste products adds to pollution. 5. To save and increase crops, insect-repellents are utilized. 6. To be fed requires population control. 7. To slow down the population growth might halt habitat destruction. 8. To manage our country reasonably means to provide comfortable life for all.

VI. Copy and translate the conditional sentences.

1. If we could have only ecologically pure transport! 2. Should the population growth slow down there will be no danger of overpopulation. 3. We could use other methods to repel insects. 4. We would have had no droughts if we had created watering systems everywhere. 5. It is necessary that children should know more about their ecology. 6. Developing watering systems would help both the soil and people depending on it. 7. If people don't limit the birth rate, wild life and their habitats will be sacrificed. 9. We wish we could have wasteless production!

VII. Copy the sentences. Ask questions to the words in bold.

1. The state of the Earth affects all of us. 2. Each person can help by putting the world first. 3. Natural wealths are being exploited unreasonably. 4. Insect repelling plants will serve a good service to a man. 5. People believe that planned economy will limit water and fuels wasting. 6. If social conscience (свідомість) keep growing we will create a planned and balanced society. 7. Careful planning could prevent urban areas from overrunning natural habitats. 8. Decorative coral is gathered by dynamiting coral reefs.

VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.

1. Because most of people want to live in towns, they are overpopulated. 2. Electric transport is the best transport, so we use it mostly. 3. People believe that these kinds of transport are the most prospective. 4. People want that electric transport should be developed. 5. It is considered that wild life could be saved only by strict control. 6. Scientists believe that people will create a well-planned society. 7. Insect repelling plants may be used so that farmers could save crops. 8. It is expected that overpopulation will bring hunger.

IX. Fill in the gaps with prepositions and conjunctions.

1. The state ____ the Earth affects all of us. 2. Buying products ____ less packaging also saves resources. 3. Energy can be saved ____ turning off lights when they are not needed. 4. The dumping of radioactive waste, chemicals, and sewage ____ the oceans can also be prevented. 5. Swamps and lakes irrigation ____ human purposes dry out the soil, destroying water balance. 6. On the other hand the arable lands are not watered enough ____ the result of the crops perishing ____ droughts. 7. Developing watering systems would help ____ the soil and people depending on it. 8. ____ population growth were to slow down, however, habitat destruction, including deforestation, might be halted.

X. Translate the following sentences into English using verbals and the Conditional Mood.

1. Якщо населення буде зростати надалі, Земля не зможе нагодувати усіх. 2. Якщо б народженість була поставлена під контроль, перенаселення не було б. 3. Переробка упаковки необхідна для того, щоб було менше відходів. 4. Те, що орна земля не обводнюється, призводить (results in) до загибелі врожаю. 5. Для збереження та збільшення врожаїв треба замінити пестициди рослинами, що відганяють комах. 6. Повідомляють, що деякі проекти руйнують баланс в природі. 7. Якби всі були економними, то вимикали б світло вчасно. 8. Відомо, що електричний транспорт – найчистіший вид транспорту.

TOPIC 2. TYPES OF SPECIES INTERRELATIONS

Vocabulary

interaction	взаємодія
property	властивість
competition	змагання
dissimilar	несхожій
benefit	вигода
harm	шкода
involve	включати
recognize	опізнавати
algae	простіші організми
fungi	гриби
lichen	лишай
maintain	підтримувати
widespread	широко розповсюджений
digestive tract	травний шлях
host	хазяїн
gut cavity	черевина
deleterious	погіршений
supply	постачання, запас

I. Translate the following text.

The interaction of species within an ecosystem is a necessary and essential property of the plant and animal community. There are several different basic types of interaction: neutralism, competition, mutualism, protocooperation, commensalisms, amensalism, parasitism, symbiosis.

Neutralism is a type of interaction in which neither species affects the other. In competition the two species are fighting for the same place, water, air, sunshine, nutrients, etc. Mutualistic relations are observed when the two species need each other for survival.

Protocooperation – is a type of interaction in which both species benefit but neither is necessary to the other.

Symbiosis is any close association of two dissimilar types of organisms. There are three broad categories of symbiosis based on whether the individual organisms are benefited or harmed by the association: commensalism, parasitism, and mutualism. Close mutualistic relations have involved many different kinds of organisms. One of the first such relationships recognized was the partnership between the algae and the fungi that form a lichen. The fungi maintain the water

supply and provides support for the system, and the algae manufacture food through the process of photosynthesis.

An interesting and widespread mutualistic association is that of the microorganisms, such as bacteria and protozoa, that live in the digestive tracts of large animals. The host has typically all enzymes necessary to digest certain complex molecules in their food, and the microorganisms function to break down the food and synthesize vitamins and other compounds needed by the host, at the same time receiving from the host food and a suitable environment in which to live. For example, flagellate protozoa live in the gut cavity of wood-eating termites, breaking down the cellulose in the wood.

II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.

essence, compete, mutualism, associate, differ, relation, interest, associate, digest, synthesis.

III. Fill in the gaps. Copy and translate the sentences.

symbiosis, receiving, involved, host, maintains, interaction, partnership, benefited.

There are several different basic types of ____ . ____ – is any close association of two dissimilar types of organisms. There are three broad categories of symbiosis based on whether the individual organisms are ____ or harmed by the association. Close mutualistic relations have ____ many different kinds of organisms. One of the first such relationships recognized was the ____ between the algae and the fungi that form a lichen. The fungi ____ the water supply and provides support for the system. The ____ has typically each enzyme necessary to digest certain complex molecules in their food. The microorganisms are ____ from the host food and a suitable environment.

IV. Transform the verbs into Passive Voice.

1. We will carry out our production plan.
2. They offered her some interesting work.
3. They have repeated their address to us.
4. She will have given us the details on the topic.
5. We were observing mutualistic relations between

two species. 6. Some species affects the other. 7. Protocooperation – is a type of interaction in which both species benefit. 8. The fungi maintain the water supply.

V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.

1. Of the first such relationships (recognize) was the partnership. 2. (Eat) by herbivorous animals vegetation is a necessary part of ecosystem. 3. (Tell) of his arrival, I went to see him. 4. The leaves (lie) on the ground reminded us of autumn. 5. Books (read) in childhood are like old friends. 6. Think what you are (say). 7. (Know) nothing of the danger we continued our way. 8. Interaction in which neither species affects the other is (call) neutralism.

VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.

1. He ____ be at the institute now. 2. He ____ take the books before. 3. I ____ to go to the seaside this summer. 4. I ____ to put off the meeting. 5. He ____ n't have done it, for he was not at home at the time. 6. ____ I send the letter just now? 7. She ____ to prepare better not to fail at her exam. 8. ____ me to tell you the truth.

VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.

1. Have you got ____ to tell me? 2. Why is there ____ at the lesson? 3. Can ____ explain the reaction? 4. Do you want ____ tea? 5. You can get these books at ____ library. 6. I have ____ dictionary today. 7. He ____ said ____, but I don't remember. 8. I will go ____ else.

VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.

1. They ____ to stay at home last night. 2. He ____ a well known scientist. 3. They ____ to leave Moscow to-night. 4. The children ____ walking down the street. 5. She ____ known as an experienced teacher. 6. ____ she still play tennis? 7. He ____ much to keep fit. 8. They ____ got problems with their adopted child.

IX. Use indirect speech.

1. “Can you, please tell us how old Kyiv is?” asked a tourist. 2. The guide said, “Kyiv is more than 1500 years old.” 3. “Who built Kyiv?” demanded the guest. 4. “Kyiv was built by princes Kyi, Schekh, and Khoriv,” answered the guide. 5. “We will see many ancient buildings in Kyiv: the Sofievsky Cathedral, the Golden Gate, the Kyiv-Pechersk Monastery,” continued the guide. 6. The tourists asked us, “Is Ukraine a highly-developed industrial country?” 7. We answered, “Yes, it is. All branches of industry were developed here.” 8. My friend added, “There are many educational establishments, theatres, museums, libraries in Ukrainian towns and cities.”

X. Translate the following sentences into English.

1. Тільки подолавши багато труднощів, можна зробити добру справу. 2. Вам було вам дане якесь завдання? 3. Доповідач відмітив, що цей метод давно застосовувався в науці. 4. Мікроорганізми синтезують вітаміни, потрібні хазяїну. 5. Нам сказали, що ми маємо піти на екскурсію на хлібний завод. 6. Які висновки ви можете зробити з побаченого? 7. Нікому не дозволено знущатися над природою. 8. Давно було відомо, що люди розвиваються у праці.

XI. Retell the Topic: TYPES OF SPECIES INTERRELATIONS

TOPIC 3. BIOENERGY USE AND PRODUCTION

Vocabulary

disadvantage	недолік
content per unit of weight	вміст на одиницю ваги
compared with	порівняно з
obtain sufficient amount	отримувати достатню кількість
fill the demand	задовольняти потреби
handle expenses	мати справу з витратами
reduce cost / price	зменшити ціну
low efficiency	низька ефективність
particulates	руйнівні літучі речовини
development	розвиток
overcome	подолати
feedstock supply	постачання харчування
crop	врожай зернових культур
fast-growing	що швидко зростають
high yield, harvest	високий врожай
research indicates	дослідження вказують
beneficial to replace	вигідно замінювати
local conditions	місцеві умови
implement	втілювати
competitive	конкурентноздатній

I. Translate the following text.

The traditional bioenergy systems do have some economic and environmental disadvantages. First, solid biomass fuels – wood, straw, trash – as energy carriers of plant origin have a fairly low energy content per unit of weight, compared with that of fossil fuels.

Second, biomass fuels often must be collected over a wide area to obtain sufficient amounts to fill the demand. These characteristics make transportation and handling expenses high. A further disadvantage of some biomass conversion systems is their low efficiency in changing biomass into usable energy. Inefficient bioenergy systems require more fuel than fossil systems. They also produce more waste products such as particulates (damaging airborn particles).

Agricultural development is overcoming some of the disadvantages of bioenergy systems, however. One important development is the design and use

offeedstock supply systems to furnish the biomass fuel. These systems consist of energy crops such as fast-growing trees and grasses. They are developed to produce high yields on a limited land area. Specialized harvest and transportation methods used with these systems reduce biomass fuel costs. Their presence could add to the landscape diversity and beauty of a region. Research indicates that it would not be economically or environmentally beneficial to replace natural forest systems with energy crops. Because feedstock supply systems must be adapted to local conditions, they will differ among regions and countries. When fossil fuel prices are low, however, biomass fuels are economically competitive at only a few locations.

Today an increasing use of biomass to produce electrical and thermal energy is observed. Turbogenerators working on the biomass gasification products can successsfully compete with traditional thermal, nuclear, and hydraulic energy resources.

II. Find in the text the derivatives of the folowing words. Define these parts of speech and translate them into Ukrainian.

tradition, characterize, convert, agriculture, develop, special, diverse, economical, nature, generate.

III. Fill in the missing words. Copy and translate the sentences.

harvest, waste, development, consist, fossil, research, damaging, to obtain.

Biomass fuels have a fairly low energy content compared with that of ____ fuels. Second, biomass fuels often must be collected over a wide area ____ sufficient amounts. Biomass conversion systems have low efficiency in changing biomass into usable energy. They also produce more ____ products such as particulates. Particulates are ____ airborn particles. Agricultural ____ is overcoming some of the disadvantages of bioenergy systems, however. Feedstock supply systems ____ of energy crops such as fast-growing trees and grasses. Specialized ____ and transportation methods used with these systems reduce biomass fuel

costs. _____ indicates that it would not be economically or environmentally beneficial to replace natural forest systems with energy crops.

IV. Transform the verbs into Passive Voice.

1. We write our home address in the left top corner of the envelope. 2. They have been changing biomass into usable energy. 3. Agricultural development is overcoming some of the disadvantages. 4. All people sow crops for food. 5. They opened the university in 1930. 6. The sponsors have given new computers to the university. 7. The tutors will take the students to the food plant. 8. All countries were fighting with pollution in the past century.

V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.

1. Plants are (use) sunlight to synthesize organic compounds. 2. Bioenergy systems consist of energy crops such as (fast-grow) trees and grasses. 3. They are developed to produce high yields, land area (limit). 4. (Specialize) harvest and transportation methods (use) with these systems, biomass fuel costs were reduced. 5. Fossil fuel prices (be) low, biomass fuels are economically competitive at only a few locations. 6. Today an (increase) use of biomass to produce electrical and thermal energy is observed. 7. Not (create) efficient bioenergy systems people can not economize on fuel. 8. (Develop) chemistry people obtained new substances.

VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.

1. I will _____ to finish my work in a month. 2. We were _____ to take part in the competition. 3. All your dreams _____ come true. 4. Feedstock supply systems _____ probably be implemented 5. Biomass fuels often _____ be collected over a wide area. 6. We _____ to take care of our health. 7. The exam _____ to start in

the morning. 8. Turbo-generators ____ successfully compete with traditional energy resources.

VII. Fill in the indefinite and negative pronouns and adverbs.

Copy and translate the sentences.

1. The traditional bioenergy systems do have ____ economic and environmental disadvantages. 2. ____ must be used for fuel. 3. Purer kind of fuel is used _____. 4. Have you ____ gasoline left? 4. ____ bad will happen if we use sun energy. 5. Use waste basket if there is _____. 6. Using sun energy requires ____ biomas. 7. Is there enough transport for ____? 8. You can find ____ necessary at the supermarket.

VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.

1. Biomas fuel ____ the cheast fuel in some countries.. 2. They ____n't have chemistry yesterday. 3. I ____ to translate this report as soon as possible. 4. ____ everything in time. 5. Biomass fuels ____ competing economically at only a few locations. 6. You ____ done everything possible. 7. The students ____ to submit their thesis in December. 8. ____ all people need cars?

IX. Use indirect speech.

1. We were told, “America was discovered by Columbus.” 2. It was known, “The first inhabitants of America were Indians.” 3. “Today Indians are inhabiting mostly the Southern America,” read the book. 4. He questioned, “How much will it cost?” 5. The announcement went, “The participant gets a present.” 6. The newspaper went, “The costs of fuel are not rising.” 7. Scientists asked, “What kind of fuel is more harmful for health?” 8. The technologists argued, “We have never had so much biomass in our country.”

X. Translate the following sentences into English.

- 1 . Його запитали, які види пального використовувалися раніше.
2. Ми мусимо обирати дешевше та ефективніше паливо.
3. Вони відповіли, що робота буде зроблена кимось іншим.
4. Вирощуючи енергетичні врожаї, можна виробляти пальне з біомаси.
5. Використана біомаса може забезпечити нас чистим пальним.
6. Ви читали статтю, опубліковану в університетській газеті "Промінь?"
7. Ви зможете отримати інформацію в деканаті.
8. Декільком студентам дали місця на заводі.

XI. Retell the Topic: BIOENERGY USE AND PRODUCTION

TOPIC 4. WHY SAVE TROPICAL RAIN FOREST?

Vocabulary

to save	rain forests	спасти дощові ліси
steam		пара
movie		кіно
in trouble		в небезпеці
become concerned		стурбовані
send		посилати
located in a belt		розташований у поясі
disappear		зникати
turn into deserts		перетворюватися на пустелі
at a rate		зі швидкістю
gain		вигравати
medicinal value		медична цінність
beyond		поза
impact		вплив
weather patterns		погода
vegetation		рослинність
huge amount		величезна кількість
contribute		привносити
global warming		глобальне потеплішання
prevent soil erosion		запобігати ерозії почви
damaged by floods		пошкоджена припливами
income from mining		прибуток від гірничої промисловості
timber		деревина
cattle		худоба

I. Translate the following text.

Tropical rain forests – those steamy jungles shown in movies, where it's always hot and it rains every day – are in trouble, and people around the world are becoming concerned. The rock star Sting has organized concerts to save the Brazilian rain forests, and dozens of environmental groups have raised millions of dollars to save tropical rain forests and send experts to help. Yet there are many people who say, "Why save rain forests? Aren't people more important than trees?"

Located in a belt of 33 countries, mostly around the equator, more than half of the tropical rain forests have disappeared in the past fifty years. Some are actually turning into

deserts. Cutting out Amazon forests is connected with building roads, towns, development of natural resources and arranging agricultural plantations. With this forest disappearing at a rate of 100 acres per minute nearly everyone in the world has something to gain from saving it. For example, scientists have learned that over 1300 rain forests plants in the Amazon area have medicinal value. But the value of tropical rain forests goes beyond medicine. The tropical forests concentrate about 3 mln species of flora and fauna, in particular, 80% insects and 65% plants. These forests have a critical impact on global weather patterns. Their vegetation absorbs enormous quantities of solar energy, thus affecting wind and rainfall patterns around the world. The forests play an important role in cleaning the Earth atmosphere.

This vegetation contains huge amount of carbon dioxide. As the forests disappear, the carbon dioxide is released into the air and contributes to "global warming" – what we know as the "greenhouse effect". Rain forests also help to prevent soil erosion in areas that could be damaged by floods and wind, and they also prevent pollution.

Income from mining, export crops, timber, and cattle can be calculated in dollars, but the benefits of the forests as a protector of the land cannot.

II. Write whether these statements are true or false and give the correct variant.

1. Millions of dollars are raised to develop tropical rain forests. 2. Some rain forests are actually turning into deserts. 3. Few rain forests plants in the Amazon have medicinal value. 3. Plants are arranged in place of the forests. 5. These forests have no impact on global weather patterns. 6. Cutting out rain forests is dangerous. 7. Rain forests create soil erosion. 8. Rain forests are protecting our atmosphere.

III. Match the synonyms.

- 1) wood, care, affect, plants, amount, avoid, territory, harvest, count, gain.
- 2) calculate, prevent, crop, win, concern, impact, forest, vegetation, quantity, area.

IV. Copy and translate the following sentences. Define the form and function of the Infinitive.

1. The city authorities should help to save forests. 2. For us to develop civilization we should take an active part in trees protection. 3. Why to save rain forests? 4. Nearly everyone in the world has something to gain from saving the forests. 5. Rain forests also help to prevent soil erosion. 6. To have saved Darnitsa elm trees filters were set on the plants' chimneys. 7. To be protected from erosion fields should be surrounded with forests. 8. Rain forests are proved to prevent soil erosion and pollution.

V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.

1. We save rain forests for the sake of the coming generations. 2. All of us _____ like to see the tropic forests. 3. People _____ use the sun energy not to cut forests for fuel. 4. The environmental groups announced that they _____ protect rain forests. 5. Natural resources are used as people _____. 6. We _____ not forget about the danger of "global warming". 7. We _____ not use those rare herbs in medicine if there were no tropical forests. 8. Fighting to protect rain forests people knew that they _____ save our atmosphere.

VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.

1. Tropical rain forests – _____ steamy jungles shown in movies, – are in trouble.
2. _____ is the ecologists, who care about tropical rain forests. 3. _____ is one of the urgent problems at present. 4. _____ who say, "Why save rain forests? are ignorant of the problem. 5. The tropical rain forests _____ occupied large territories in North America have disappeared in the past fifty years. 6. _____ should think about the unique plants and animals in the forests. 7. _____ will be impossible to restore. 8. _____ forests have a critical impact on global weather patterns.

VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.

1. You (concern) with the future of the rain forests? 2. Remember, how many elm trees people (cut) each New Year. 3. Forest already (cut) on large territories of Ukraine. 4. Today we not (need) wood to build houses. 5. If we are going to reduce our forest areas, we (rob) ourselves. 6. Millionaires (make) big money on developing tropical areas. 7. Nature (kill) by us. 8. Only common effort (save) our ozone lungs.

VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.

1. The tropical rain forests are known to be those where it's always hot and it rains every day. 2. These being in trouble, people around the world are becoming concerned. 3. The rock star Sting is known to have organized concerts to save the Brazilian rain forests. 4. Dozens of environmental groups are reported to have raised millions of dollars to save tropical rain forests. 5. Environmental groups send experts to help to save rain forests. 6. With this forest disappearing at a rate of 100 acres per minute nearly everyone in the world has something to gain from saving it. 7. Scientists prove the rain forests' plants in the Amazon to have medicinal value. 8. The tropical forests are necessary for about 3 mln species of flora and fauna to survive.

IX. Copy and translate the sentences paying attention to the introductory and connective words.

1. With many factors in view, wood must be economized and replaced. 2. For example, scientists have learned that over 1300 rain forests plants in the Amazon have medicinal value. 3. But the value of tropical rain forests goes beyond medicine. 4. The tropical forests concentrate about 3 mln species of flora as well as fauna, in particular, 80% insects and 65% plants. 5. Their vegetation absorbs enormous quantities of solar energy, thus affecting wind and rainfall patterns around the world. 6. As the forests disappear, so the carbon dioxide is released into the air. 7. The carbon dioxide contributes to "global warming" – what we know as the "greenhouse effect". 8. Rain forests also help to prevent soil erosion in areas that could be damaged by floods and wind.

X. Translate the following sentences into English using the Infinitive and Participle wherever possible.

1. Ліси, як відомо, дають нам кисень. 2. Тропічні ліси зараз у біді, і люди в усьому світі стурбовані їхнім майбутнім. 3. Тропічні ліси розташовані навколо екватора, і їхня флора та фауна найбагатіші в світі. 4. Вважають, що тропічні дощові ліси захищають Землю від потеплішання. 5. Коли знищують ліси, руйнують озоновий шар Землі. 6. Оскільки багато рослин дощових лісів мають медичну цінність, треба зберігти ліси. 7. Щоб спасті ці ліси, необхідно заборонити їхнє вирубування. 8. Важливо розповсюджувати екологічні знання, щоб люди піклувалися про природу.

XI. Retell the Topic: WHY SAVE TROPICAL RAIN FOREST?

TOPIC 8. ACID RAIN

Vocabulary

impact the land	впливати на землю
coal	вугілля
internal combustion engine	двигун внутрішнього згоряння
clear evidence	явне свідоцтво
causes damage	спричиняти шкоду
creature	створіння
degree of acidity	ступінь кислотності
lose the ability	втрачати здатність
absorb and retain	всotувати та утримувати
sodium	натрій
switch to supplies	використовувати носії
clean	чистий
scrubber	шкребниця
remove emissions	видаляти викиди
restrict the amount	обмежувати кількість
offending	абразивний
light bulb	електролампа
reduce demand for	зменшувати попит
consumption	споживання
cheap	дешевий
solutions to this problem	вирішення проблеми

I. Translate the following text.

Acid rain forms when certain chemicals are absorbed into the earth's atmosphere and fall to the ground in rain, snow, or fog. Dry acidic particles also fall to earth, impacting the land much as acid rain does. The primary source of acid rain is the burning of coal and oil in electrical power plants, industrial boilers, and internal combustion engines such as those in automobiles. Fossil fuels such as coal and oil produce sulfur dioxide and oxides of nitrogen when they are burned. In the atmosphere these react with ozone and other compounds forming acids, specifically sulfuric and nitric acids the acids in acid rain.

There is clear evidence that acid rain causes damage to living creatures in lakes and streams, particularly in waters where the natural pH or degree of acidity is already high. Here the ability to neutralize the high acidity of added acid rain is marginal. Even small changes in the balance between acids and bases in stream and lake water

can cause large changes in pH levels. Many kinds of fish and other aquatic organisms lose the ability to absorb and retain sodium (salt) in waters with a low pH. In Switzerland and Great Britain forests dry out because of acid rains. In Ukraine the area of acid soils grew by 33% for the last 35 years. Acid soils require liming that increases the cost of agricultural products.

Emissions of sulfur dioxide and nitrogen oxides, the building blocks of acid rain, can be reduced by switching to low-sulfur coal and oil supplies. Sulfur can be cleaned physically or chemically from coal and oil before burning. In addition, scrubbers can be used to remove acid-rain-causing emissions from gases after combustion. Emissions can also be controlled by lowering the temperature at which fuels are burned or by restricting the amount of oxygen used while they are burning. One of the best ways of restricting offending emissions is by simply conserving energy. Energy-efficient light bulbs and refrigerators, for example, reduce demand for electricity. Reducing energy consumption is the cheapest and most efficient way to reduce acid rain and is far better than any of the technical solutions to this problem.

II. Write whether these statements are true or false and give the correct variant.

1. Air pollution is created by certain chemicals.
2. The primary source of acid rain is the burning of fossil fuel.
3. Burning industrial waste forms phosphoric acid in the air.
4. It is possible to neutralize the high acidity of the air.
5. Many fishes and other aquatic organisms lose the ability to remove chemicals in waters with a high pH.
6. Sulfur can be cleaned physically or chemically from coal and oil before burning.
7. Offending emission can be restricted.
8. Economizing energy will reduce acid rains.

III. Match the synonyms.

- 1) take in, ground, affect, purify, restrict, apply, sour, irradiate, quantity, burning.
- 2) clean, limit, emit, acid, combustion, impact, use, amount, absorb, soil.

IV. Copy and translate the following sentences. Define the form and function of the Infinitive.

1. Emissions of sulfur dioxide and nitrogen oxides can be reduced.
2. There are many ways to reduce acid rain.
3. To absorb and retain sodium (salt) aquatic organisms

should live in waters with a normal pH. 4. Sulfur can be cleaned physically or chemically from coal and oil before burning. 5. In addition, scrubbers can be used to remove acid-rain-causing emissions from gases after combustion. 6. Emissions can also be controlled by lowering the temperature at which fuels are burned. 7. To report the ecological problems on mass media is important. 8. It is necessary to restrict the amount of oxygen used while fuels are burning.

V. Copy the following sentences using the verbs should, would antranslate them into Ukrainian.

1. The ecologists predicted that the area of acid soils ____ grow. 2. Doctors warned that acid soils ____ increase cancer in population. 3. Acid soils ____ be restored and revived. 4. Why ____ people die of cancer because of uncles technologists? 5. ____ you like to use pure energy? 6. You ____ be very careful with gas stoves. 7. Civilized people don't waste energy as they _____. 8. Sodium reduces degree of acidity.

VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.

1. Internal combustion engines such as ____ in automobiles also contribute to acid rain. 2. Burning fossil fuels produce sulfur dioxide and oxides of nitrogen. 3. In the atmosphere ____ react with ozone and other compounds forming acids. 4. There is clear evidence ____ acid rain causes damage to living creatures. 5. Acid soils grow infertile and ____ reduces food supplies. 6. ____ can say that the ability to neutralize the high acidity of added acid rain is marginal. 7. ____ is necessary to restrict the offending emission. 8. ____ of the best ways of restricting offending emissions is by simply conserving energy

VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.

1. Sulfur dioxide (fall) down on the ground as yellow precipitate. 2. In Ukraine the area of acid soils (grow) by 33% for the last 35 years. 3. Acid rain already (cause) much damage. 4. Drinking water (need) filtering and softening. 5. In some areas the degree of soil acidity (rise) dramatically. 6. We (conserve) energy when using electrical devices.

7. I wonder what is the pH of water we (drink) all our life. 8. We (not have) high crops if we don't restore the alcalinity (лужність) of the acid soils.

VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.

1. Certain chemicals being absorbed into the earth's atmosphere, they fall to the ground in rain, snow, or fog. 2. Dry acidic particles falling to earth, they impact the land much as acid rain does. 3. The primary source of acid rain is known to be the burning of coal and oil in electrical power plants, industrial boilers etc. 4. Acid rain is evident to causes damage to living creatures. 5. Sulfur dioxide and nitrogen oxides being the building blocks of acid rain, they should be neutralized in wastes. 6. Reducing energy consumption is the cheapest and most efficient way to reduce acid rain, this being the best solutions to this problem. 7. We know energy-efficient light bulbs and refrigerators to reduce demand for electricity. 8. For people to economize energy special laws should be developed.

IX. Copy and translate the sentences paying attention to the introductory and connective words.

1. Because sulfuric acid is burning leaves trees are killed by acid rain. 2. In Switzerland and Great Britain forests dry out because of acid rains. 3. Acid rain causes damage to living creatures in lakes as well as in streams. 4. Both fish and other aquatic organisms lose the ability to absorb and retain sodium (salt) in waters with a low pH. 5. Though reducing energy consumption is the cheapest and most efficient way to reduce acid rain many people do not care yet. 6. Since pH in lakes and streams grew low, fish disappeared there. 7. Neither fish nor crabs can live in acid waters. 8. Acid soils require liming that increases the cost of agricultural products.

X. Translate the following sentences into English using the Infinitive and Participle wherever possible.

1. Коли хімічні речовини всотуються земною атмосферою, утворюються кислотні дощі. 2. Давно були свідоцтва (evidence) того, що кислотні дощі знищать природу. 3. Коли ступінь кислотності води знижується, риба втрачає

здатність всотувати та утримувати натрій – сіль. 4. Відомо, що в Швеції і Великобританії дерева всихають зз-а кислотних дощів. 5. Для зниження кислотності ґрунту його слід вапнувати. 6. Зменшити кислотні дощі можна економією енергії. 7. Вважають, що економія енергії зменшить кислотність атмосфери. 8. Треба, щоб люди контролювали викиди забруднюючих речовин.

XI. Retell the Topic: ACID RAIN

TOPIC 9. GREENPEACE

Vocabulary

expose	розкривати
to sail	плавати
to hire	наймати
link	зв'язувати
threat	загроза
abandon	покинути
to proclaim	проголошувати
concern	піклуватися
purpose	мета
create	творити
head quarters	штаб квартира
operate	працювати
support	підтримувати
contribution	внесок
make a decision	приймати рішення
safeguard	стояти на сторожі, оберігати
to appoint	призначати
to approve	погоджувати

I. Translate the following text.

Greenpeace is the leading independent organization that uses peaceful direct action and creative communication to expose global environmental problems. Greenpeace promotes solutions that are essential to a green and peaceful future. It was founded in 1971 in Canada, when members of the Committee in Vancouver, renamed their organization. These members set sail from Vancouver in a hired fishing boat for the US atomic test zone of Alaska to protest nuclear weapons testing. These brave people called themselves Greenpeace, linking their concern for the environment with their desire to see a world free from nuclear threats. After Greenpeace's action, the US abandoned its nuclear testing at Alaska. Greenpeace proclaimed their purpose: to create a green and peaceful world. Today, 30 years later, Greenpeace is a global environmental organization operating in more than 27 countries with more than 100,000 members in Canada and over 2.5 million members around the world.

Greenpeace international is funded by national offices. These, in turns, are financed almost entirely by small contributions from 5 million supporters in 158 countries. The Council – is the major decision-making body of Greenpeace. Each Greenpeace office appoints a representative to the council, who meets once a year to approve the budget of Greenpeace for the following year and to make decisions on the overall direction and policy, especially for the longer term.

At this moment, Greenpeace campaigners are working around the globe, monitoring governments and industry, researching solutions, blocking dangerous practices, doing whatever it takes to protect our planet's life-giving resources. Today Greenpeace works on the following environmental campaigns: Save the Great Bear rainforest, Save the boreal forest, Stop climate change, Eliminate the threat of genetic engineering; International campaigns: Stop toxic pollution, Safeguard our oceans, Stop the nuclear threat, Protect Ancient Forests.

II. Write the main idea of the text.

III. Match the notions and their definitions.

- 1) concern, weapon, global, expose, protect.
- 2) world wide; disclose, make known; keep safe from danger; something designed or used in fighting or struggling; anxiety, care about something.

IV. Copy and translate the following sentences. Define the form and function of the Gerund.

1. Being a leading independent organization gives Greenpeace the right to control ecology.
2. Exposing global environmental problems is absolutely necessary.
3. Having sailed for the US atomic test zone of Alaska expressed Greenpeace's protest against nuclear weapons testing.
4. Linking their concern for the environment shows their desire to see a world free from nuclear threats.
5. After Greenpeace's having sailed for the US test zone, the US abandoned its nuclear testing at Alaska.
6. Greenpeace proclaimed their purpose: creating a green and peaceful world.
6. Operating in more than 27 countries makes Greenpeace a global

environmental organization. 7. There is much use in struggling against wars. 8. Being dangerous makes nuclear tests undesirable in many countries.

V. Replace the Infinitive with the Gerund. Write down and translate the sentences.

1. Greenpeace proclaimed their purpose: to create a green and peaceful world. 2. The council meets once a year to approve the budget of Greenpeace for the following year and to make decisions on the overall direction and policy. 3. To research solutions blocking dangerous practices is a noble mission. 4. Greenpeace may be proud to do whatever possible to protect our planet's life-giving resources. 5. Today Greenpeace works to save the Great Bear rainforest, the ocean, the boreal forest. 6. They suggest us to join in.

7. That the forces of peace will win is quite clear. 8. For us to save the Earth from nuclear threat is urgent.

VI. Copy and translate the conditional sentences.

1. If everyone spoke for peace there would be no wars. 2. If it had not been for Green Peace the USA would not have stopped nuclear tests in Alaska. 3. The United Nations Organization must order that wars should be banned forever. 4. There might have been more books and films about the effects of radiation on nature. 5. I wish we could have never had Chernobyl disaster! 6. If people didn't care about their safety they would be eliminated. 7. If a child is isolated from his environment he will have an undeveloped mind. 8. It is necessary that all proposals should be registered.

VII. Copy the sentences. Ask questions to the words in bold.

1. Greenpeace promotes solutions that are essential to a green and peaceful future. 2. It was founded in 1971 in Canada. 3. Members of the Committee in Vancouver renamed their organization. 4. These members set sail for the US atomic test zone of Alaska to protest nuclear weapons testing. 5. The US has abandoned its nuclear testing at Alaska. 6. Green Peace is supported by people the world over. 7. Organizational Profile Greenpeace international is funded by

national offices. 8. At this moment, Greenpeace campaigners are working around the globe.

VIII. Transform the subbordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.

1. Greenpeace is the leading independent organization, and its decisions are important. 2. Green Peace is promoting peace, this is not their only function. 3. They went on a voyage to Alaska because they wanted to stop nuclear tests there. 4. Green Peace proclaims noble ideas, so the governments attend to it. 5. That they sailed to Alaska showed their care. 6. We know that they are developing relations with many countries. 7. The organization calls itself Green Peace because it promotes peace. 8. We invited them so that they could take part.

IX. Fill in the gaps with prepositions and conjunctions.

1. Young people ____ our country have every opportunity to study ____ to get a higher education. 2. Students can find all the books necessary ____ their studies in the libraries ____ reading rooms of their universities and work ____ the laboratories and workshops ____ their universities. 3. To enter a university you have to take entrance examinations ____ are rather difficult. 4. Students are able to study ____ in evening ____ day-time departments. 5. There are full-time students, part-time students, ____ extramural students ____ study by correspondence. 6. The training ____ specialists ____ our universities combines theoretical studies ____ practical work and industrial training. 7. ____ the end of each term students have to take their examinations and credit tests. 8. The main task of higher school is to give students profound theoretical knowledge and practical skills ____ their profession ____ to train highly-qualified specialists.

X. Translate the following sentences into English using verbals and the Conditional Mood.

1. Грин Піс використовує мирні акції для боротьби за мирне та безпечне навколоішнє середовище. 2. Грин Піс піднімає найважливіші проблеми захисту життя на Землі від ядерної загрози. 3. Ця організація фінансується багатьма

країнами. 4. Учасники Грін Піс відпливли на кораблі до Аляски, щоб припинити випробування ядерної зброї. 5. Учасники Грін Піс наполягали, щоб ядерні випробування в Алясці були заборонені. 6. Якби ми могли заборонити війни ! 7. Грін Піс вимагає, щоб всі життєві ресурси нашої планети були взяті під контроль. 8. Зараз Грін Піс контролює держави та забороняє небезпечну діяльність.

XI. Retell the Topic: GREENPEACE

TOPIC 7. POPULATION DYNAMICS

Vocabulary

enormous density	надзвичайна густина
sudden and explosive	раптовий та бурхливий
related to seasonal events	пов'язаний зі зміною пори року
emergence	необхідність
predator-prey relationships	відношення хижака та дичини
growth S-shaped curve	крива росту у формі S
to keep below the level	тримати нижче рівня
to starve	голодувати
increase rapidly	швидко зростати
fewer hatchlings	менше пташенят
passenger pigeon	мандрючий голуб
maintain	підтримувати
self-sustaining size	необхідна кількість
defensive response	захисна реакція
avoid	унікати
drop	падати
encounter	зустрічати
abundant	рясно
swing	коливатися

I. Translate the following text.

The numbers of plants or animals in a population change with time. Sometimes the changes in population densities are sudden and explosive, at other times they are gradual. Often changes are related to seasonal events, such as the emergence of houseflies in the spring and their rapid die-off in the autumn.

The rate of growth of an animal population depends on the birthrate, the natural death rate, the predator-prey relationships, the food supply, parasitic activity, infection by bacteria, and other factors, such as climatic changes. Some animals are strongly territorial and will not let others of their species occupy the same territory thus quickly limiting the population density of the species. Some factor limits the growth and the growth curve of most populations results in a sigmoid S-shaped curve.

Many animals manage to keep their population below the level at which they would begin to starve. Often when a bird population is increasing rapidly, there will be fewer eggs laid and fewer hatchlings. On the other hand the enormous

density of passenger pigeons in early America was thought to have been the very stimulus that maintained reproduction of the pigeon. When reduced by man, the population suddenly went below the self-sustaining size and extinction of the species resulted from lack of social stimulus.

An explosive increase of population occurs when predators are removed. There is an enormous increase in prey population. The predator-prey relationship is always a complicated one. The activity of the predator generates a defensive response in the prey, such as increased ability to hide or to avoid the predator. The predator population will then drop and the prey population will increase. But then it becomes easier for the predator to encounter the more abundant prey, and the cycle swings the other way. Many animal populations undergo strong cyclic changes in this way.

II. Write the main idea of the text.

III. Match the notions and their definitions.

- 1) predator, occupy, species, starve, prey.
- 2) praying upon others; animal, bird, etc. killed or eaten by another; group having some common characteristics; suffer or die from hunger; live in.

IV. Copy and translate the following sentences. Define the form and function of the Gerund.

1. There will be fewer eggs laid and fewer hatchlings.
2. Being infected by bacteria reduces the population.
3. Having removed predators increases the population explosively.
4. Being reduced by man, resulted in extinction of the population.
5. With controlled birthrate nations can live without starving.
6. Physically, the individual's behavior was regarded as interaction of forces of attracting and repulsing.
7. Multiplying may not restore because of lack of social stimulus.
8. Saving people's biomes makes nationalities important.

V. Replace the Infinitive with the Gerund. Write down and translate the sentences.

1. Not to let others of their species occupy the same territory results in limiting the population density of the species. 2. Many animals manage to keep their population below the level at which they would begin to starve. 3. Limiting the population density of the species results in better feeding. 4. The enormous density of passenger pigeons in early America was the stimulus to maintain their reproduction. 5. To have been reduced by man resulted in extinction of the species. 6. Then it becomes easier for the predator to encounter the more abundant prey. 7. To save various nations is possible only by social agreement. 8. To be good means to be human.

VI. Copy and translate the conditional sentences.

1. If it were not for the food supply, and other factors, the populations would grow enormously. 2. If some animals were not strongly territorial they would let others of their species occupy the same territory. 3. Should the people had not adapted genetically and culturally they could not have survived in low temperatures. 4. If physical adaptation is not taken into account we will not explain appearance and skin colour of peoples in extremal climats. 5. Should people didn't tend to retaining social order the society couldn't exist as a unity. 6. It is necessary that the nations should be able to withstand their rights. 7. Could the national economies be stable there would be much less problems with migration. 8. But for the political problems UNO might help starving nations maintain their life level.

VII. Copy the following sentences. Ask questions to the words in bold.

1. The numbers of plants or animals in a population change with time. 2. Often changes are related to seasonal events. 3. The rate of growth of an animal population depends on the birthrate, etc. 4. Some factor limits the growth. 5. A bird population is increasing rapidly. 6. Under different environmental and cultural factors men have adopted different diets. 7. Animal populations were reduced by man. 8. The population suddenly went below the self-sustaining size. 9. Extinction of the species has resulted from lack of social stimulus. 10. The predator-prey relationship will always be a complicated one.

VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.

1. Most nations got used to live on one territory and are unable or dislike to change their residence, but some are very mobile. 2. Many species are becoming extinct, so they should be restored artificially. 3. It is evident that people migrate on material reasons. 4. If individual and social interests are balanced people will create really free society. 5. It is known that people can move from one social strata to another. 6. Individual will develop when he is engaged in collective work. 7. People require that leader should move constructive ideas. 8. People want that their children could have better living.

IX. Fill in the gaps with prepositions and conjunctions.

1. The numbers ____ plants or animals in a population change with time. 2. Sometimes the changes ____ population densities are sudden ____ explosive, 3. Often changes are related to seasonal events, ____ the emergence of houseflies ____ the spring. 4. ____ bacteria, and other factors, ____ climatic changes. 5. ____ the population density of the species is quickly limited. 6. ____ reduced ____ man, the population suddenly went ____ the self-sustaining size. 7. There should be food ____ all. 8. The activity of the predator generates ability of the pray to hide ____ to avoid the predator. 9. The predator population will ____ drop and the prey population will increase. 10. But ____ it becomes easier ____ the predator to encounter the more abundant prey.

X. Translate the following sentences into English using verbals and the Conditional Mood.

1 Для того, щоб популяція зростала треба, щоб її не знищуали. 2. Якби хижаки не знищували дичину, то дичина б не мала достатньо їжі. 3. Оскільки зміни густини деяких популяцій залежать також від рівня народжуваності, то бувають більші та менші популяції. 4. Вважають, що багато популяцій тварин міняються циклічно. 5. Якби деякі популяції не витісняли інші з їхньої території, останні б не зменшувалися. 6. Відомо, що пора року чи соціальний фактор може впливати на зменшення та зникнення виду

живих істот. 7. Саме тому, що дичина уникне хижаків, вона розмножується. 8. Коли хижаків знищують, дичина зростає в кількості.

XI. Retell the Topic: POPULATION DYNAMICS

TOPIC 8. The Black Sea Pollution

1. Translate the following text.

The story about the Black Sea pollution starts like almost any other pollution story. Once, about half a decade ago, the Black Sea had very rich and diverse marine ecosystems. It also had major economic benefits in the form of millions of tourists coming from all over the world, not to mention the abundant fisheries.

But in the 1990s, this important natural resource has been brought at the brink of destruction. Once rich biodiversity became only a fond memory, and foreign tourists are no longer coming to enjoy the natural beauties that this area once offered. There is also no more fish, and tragically the Black Sea has become an area to dump all forms of solid and liquid waste.

The Black Sea is full of different pollutants such as toxic metals and agrochemicals. These substances have caused an overproduction of phytoplankton which prevents light from reaching the sea grasses and algae, thus making a huge damage to marine life.

Many tanker accidents caused oil pollution, while coastal industries continue to discharge waste products directly, with little or no treatment. This, along with huge industrial activity in the area, shipping and offshore oil exploration have created critical environmental situation.

In order to fight this pollution, the six surrounding countries signed the Bucharest convention in 1992 but this convention has so far had very little impact because several governments have not yet released the funds needed to fulfill their commitments in fight against the Black Sea pollution. And so the pollution still continues.

2. Translate into Ukrainian.

1. The hotel we stayed at is in the centre of the city.
2. The film we saw yesterday is not a very good one.
3. I think he is the best man I have ever known.
4. The experiments showed this substance was unique in its properties.
5. We know the value of voltage is the same in all the elements of a parallel circuit.
6. The weight of an atom depends on

the number of protons and neutrons it contains. 7. The experiment we have made is of great importance to our laboratory. 8. The problem we will discuss is connected with new electronic devices. 9. We think cadmium is very useful for the application in transistors. 10. The instructor said people would use this device in long distance flights.

3. *Translate the sentences, paying attention to the spaceless contract sentences.*

Identify the places where they could be words which, that, whom.

1. The papers you must take away and burn are in these boxes.
2. I like the watch my father gave me.
3. I do not think the distance is very great.
4. He says we'll find these stones later on.
5. I am afraid you will be ill.
6. Don't you know water becomes ice if the temperature is below zero?
7. The girl you are looking at is a young scientist.
8. Where is the umbrella I gave you?
9. What is the name of the river we see in the distance?
10. At the exhibition I saw the picture you like so much.

4. *Fold the two sentences in English for each type asyndetic subordinate sentence.*

5. *Tell about water pollution using active words and phrases.*

TOPIC 9. Air Pollution

1. Translate the following text.

Air pollution has probably been with us since the very beginning of our existence on this planet, and even when man was not present. Today, industrial activity is so great and fuel-powered transportation devices are so numerous that air pollution of human origin is starting to produce noticeable effects on a global scale. Carbon monoxide (CO) emitted by automobile engines arises from incomplete combustion of hydrocarbons found in gasoline in which the fuel reacts with less oxygen than it is theoretically possible. It is estimated that as a result of human activity about 260 million tons of carbon monoxide are released into the Earth's atmosphere every year. Automobile exhaust gases contain an average of 4–5 % CO. As to sulphur oxides, they have other bad effects in addition to those concerning human health. In high concentrations they are lethal to vegetation. There has appeared one more type of pollution which is threatening the globe as a whole. The protective layer of ozone around our planet is under severe attack. Alarm bells sounded in 1982 when researches in the Antarctic first identified a yawning hole where the ozone layer is the thinnest. Five years later it was reported that the hole had grown to an area the size of the United States. The fundamental importance of the ozone layer is that it acts as a filter intercepting most of the sun's radiation including potentially harmful ultraviolet β -rays which can cause melanoma – skin cancer. The cause of the appearance of the arctic hole is the growing industrial use of chlorine compounds called chlorofluorocarbons (CFC-s). CFC is a propellant gas commonly used in aerosol sprays, air cooling systems in fridges and air conditioning. There is the need for an international agreement that would completely stop CFC production.

2. Determine if the statements are correct.

1. Industrial activity produces no effect on nature.
2. Automobile engines emit carbon monoxide.
3. Every year one ton of carbon monoxide is emitted into the atmosphere.
4. Sulphur oxides are harmful only to human health.
5. Scientists discovered the hole in ozone layer in 1917.
6. Now the ozone hole is the size of Moldova.
7. Ozone layer

protects the Earth against the sun's radiation. 8. Too much ultraviolet radiation can cause only good suntan. 9. The arctic hole appeared due to the use of CFC-s. 10. CFC-s are used in nuclear reactors.

3. *Read and translate the following text.*

Eco - catastrophe Air pollution continues to be the most obvious manifestation of environmental deterioration. Giant metropolises like New York and Los Angeles, suffer from recurrent smog disasters. The public has been partially prepared for the worst as TV screens became filled with scenes of horror from the areas worst affected by pollution. Terms like nitrogen oxide, acute bronchitis and cardiac arrest began to have real meaning for most Americans. The department of Health, Education and Welfare announced studies that showed unequivocally that increasing death rates from hypertension, cirrhosis of the liver, liver cancer and a series of other diseases had resulted from these chemical compounds – products of industrial waste and automobile exhaust fumes.

4. *Read the dialogue on roles.*

A: Can you tell me anything about smoggy cities?

B: I know that the smoggiest cities in the world are Teheran, Baghdad, Delhi, Calcutta, Athens and Madrid.

A: And what is the reason?

B: It's the presence of great amount of sulphur dioxide and suspended particles in the air. Rain washes these harmful substances out of the air, but this creates "acid rain".

A: Are acid rains harmful?

B: Certainly. They pollute water, damage crops, forests and buildings.

A: Do they affect people's health?

B: Of course, they do.

5. *Translate the sentence, paying attention Sequence of Tenses.*

1. Nobody expected that he would ever be able to do it. 2. It seemed that everything was quite all right. 3. He told them what had happened to him in Paris. 4. We knew that he was writing a new novel. 5. He declared that he would defend his rights. 6. She said

that similar questions might be asked at the examinations. 7. We heard that she had become a champion. 8. He saw that the ship was leaving.

6. Put the verbs in brackets in the correct form.

1. I knew that John currently (to work) at a new project. 2. Mike hoped that his friend (to help) him with his technical drawing. 3. We didn't know the score, but we were sure their team (to lose) the game. 4. Yesterday Tom learned that his aunt (to be ill) for two months. 5. The children were afraid of making any noise because Mom (to sleep). 6. He said that he (to trust) me. 7. We were told that Andrew (to go) to enter that college. 8. The police found out that Bob Slant (to live) in London's suburbs at that time. 9. My parents decided that we (to celebrate) my birthday on Saturday. 10. The student wasn't able to do the translation because he (not / to know) some special terms. 11. Ann wasn't informed that the lecture (to take place) the next Friday.

7. Revise the following sentences in the past tense.

1. Mother says Nick has just phoned from the Crimea. 2. He says he has spent the whole month at the sea-side. 3. Nick says his friend and he are spending most of their time on the beach. 4. Nick says he has visited a lot of beautiful places along the Black Sea coast. 5. He says he has made lots of pictures while travelling in the mountains. 6. Mother says Nick will tell us a lot of interesting stories that happened to him. 7. She says that last time she was to the Crimea many years ago. 8. She says she will go there next summer.

8. Translate into English.1.

Він сказав, що любить проводити свою відпустку в Криму і збирається поїхати туди цього літа. 2. Він сказав, що вся сім'я прийшла в аеропорт провести його перед вильотом у Лондон. 3. Він не мав певності, що йому треба їхати саме туди. 4. Я був певен, що всі квитки в театр опери та балету вже продані. 5. Він сказав, що цю п'єсу варто подивитися. 6. Мені сказали, що незабаром цей фільм демонструватимуть на екранах кінотеатрів. 7. Він повідомив, що у нього нема ще ніяких планів щодо відпустки.

9. Learn the dialogue by heart.

TOPIC 10. Land Pollution

1. Translate the following text.

Land Pollution Facts

As more and more people learn the importance of living green, land pollution facts come more to the surface of many people's minds. Still, some are very much unaware of how much pollution exists, or about how they can help to reduce it. Of course, most land pollution comes from industrial and commercial sources such as factories, oil refineries and other industries. While it might seem like there is nothing you can do to stop such pollution, the truth is that you can make a difference. Many people are not aware of the impact that such industrial pollution can have on the earth. By helping to make it known, you can be one of the voices that will draw attention to the issue thus helping to inspire change. Happily, new laws and regulations have greatly reduced the amount of commercial and industrial pollution, but the problem still exists and there is still more work that needs to be done to reduce it further. Land pollution facts that may more directly apply to you as an individual would be those that center on pollution from littering and just not caring for the earth the way you should. Here are a few land pollution facts that pertain to littering.

- Some studies show that more than 8 million gallons of litter is thrown from car windows every day.

Of all of the items placed in landfills each year, nearly 80% of them could have been recycled.

- More than 30 billion non-biodegradable foam cups are used each year.
- More than 20 billion tons of topsoil is lost each year due to land pollution.

In addition to using your voice to spread the word about how important it is to stop commercial land pollution, there are also action steps you can take today that will cut down on your personal contribution to land pollution.

Here are a few land pollution facts how to reduce your own waste.

- Buy Used
- Many of the items that you use every day can be found used. This includes clothes, furniture, household items and many more.
- You should also donate all of your old items to a local thrift store rather than throwing them away. This will not only cut down on what ends up in a landfill, but will give someone else a chance to find what they need used rather than having to buy new.

- Of course, you won't be able to find everything you need used, but you should always start your search looking for used items and only buy new when you must. This will not only help the environment, but it will save you money as well.

Eat Organic

- When you eat organic foods, you are supporting farmers that do not use pesticides which are harmful to the environment.
- Organic foods will cost a bit more, but they are better both for the environment and for your health.

Watch the Packaging

- When you do need to buy something new, try to find products that do not use unnecessary packaging. Such packaging accounts for a lot of what is thrown away by consumers each year.
- Write to companies that use too much packaging and let them know that you would love to buy their products, but that you will not do so until they eliminate what will potentially become land pollution. We must learn to care for the earth in a responsible way so that it can continue to sustain life and provide abundant beauty both in this generation and in the generations to come.

2. Дайте відповіді на запитання. 1. Where do most land pollution problems come from? 2. What helps to reduce the amount of commercial and industrial pollution? 3. How much waste on the landfills can be recycled? 4. What are the steps which anyone can do to prevent or reduce land pollution?

3. Прочитайте і перекладіть письмово. Garbage is another important source of pollution. Every year households discard 41 million cubic metres of domestic waste – 1.18 cubic per urban resident. Nearly all this waste – 95.7% – is dumped at one of the 656 open-air sites; only a small part is processed at one of the four garbage disposal plants operating in Ukraine. Four out of five of the open-air dumps have no facilities to protect the underground water or the air and are huge toxic areas. As a result it is necessary to prohibit the use of large land areas for 50 years since the agricultural lands around dumps suffer low productivity due to pollution of the soil and the destruction of natural micro-organisms.

4. Прочитайте і перекладіть текст.

A Dying Technology Incinerators and landfills are both attempts to answer the question, “what do we do with waste?” Over the last century, governments have invested billions of dollars in increasingly sophisticated technologies in the vain hope of making waste disappear. Yet neither incinerators nor landfills truly dispose of waste; each creates significant, hazardous byproducts and generates additional waste streams that require further management. This is because waste, like all matter, can never truly be destroyed. The current paradigm of waste management attempts to impose a linear production model on a cyclical ecosystem. In the linear model of the human economy, materials are first extracted from nature, then processed into goods, then consumed, and finally discarded. The challenge, therefore, is not merely to find a new method of dealing with waste, but to completely change the manner in which materials flow through human society. At the same time, human discards must be fed back into the economy in ways that reduce the pressure on natural resources. At that point, they are no longer wastes, but resources. Alternative approaches must begin by questioning the fundamental assumptions of traditional waste management. These include the ever increasing quantity of waste generated, the mixing of disparate materials in the waste stream, and failure of much industrial design to take wastes properly into account. Waste generation is often projected to increase without limit for the foreseeable future. But it should be obvious that waste – and therefore resource consumption – cannot grow infinitely on a finite planet. Waste management must therefore be replaced by materials management: creating a closed loop economy that neither generates significant wastes nor consumes resources beyond their replacement rate. In order to achieve this closed-loop economy, true waste (material that is of no use and must be disposed) must be differentiated from discards: materials that are of no further use to their present owner but are still a resource to be fed back into the economy. This means an end to the mixed waste stream. When discards are mixed, they become useless and appear to require large-scale disposal technologies to manage them. Currently, waste management is treated as wholly unrelated to an economy’s production and consumption patterns. Governments collect and manage most waste while private firms

and consumers produce it. As a result, private businesses shift a significant portion of their costs onto society as a whole by not taking responsibility for their waste streams and by manufacturing products that cannot readily be recycled. Even when producers do have responsibility for their wastes, such as process wastes from a factory, they rarely pay the full cost of managing them. Incineration and landfilling merely transfer the problem to other populations and future generations. Large-scale industrial redesign is needed to eliminate wastes that result from production and change products so that they may be recycled. Ultimately, an effective program for dealing with waste is more about materials management than about technology. Although the details vary considerably, three principles are the key to solving the waste problem: prevention / minimization, waste stream segregation and industrial redesign.

5. Дайте відповіді на запитання.

1. What are the traditional ways of waste disposal?
2. Why are incinerators and landfills harmful to the environment?
3. What is meant by a linear production model?
4. What is a true waste?
5. What is needed to eliminate wastes?
6. What are the key principles to solve the waste problem?
7. Are you ready to sort your wastes at home?

6. Запишіть речення непрямою мовою.

1. The physicist said to the journalist: “We have already finished the experiment”.
2. The young chemist said: “The discovery is of great practical value”.
3. The engineers replied: “We must make the design accessible for cleaning”.
4. The operator said: “It was difficult to maintain constant temperature.”
5. The scientist said: “We have been discussing the problem with our colleagues for two hours”
6. The researcher declared: “The development of the electronic computer has changed the scientific world”.
7. The programmer argued: “Any programme contains at least one error”.
8. The plumber reassured us: “From now on the tap will work perfectly well”.

9. The chief said to a young designer: “Check the capacity of the engine”.

10. The lecturer said: “The neutron was discovered in 1932”.

7. Передайте речення непрямою мовою.

1. The teacher explained, “In fact every hydraulic system can be reduced to a simple pump-motor system”.

2. The expert said, “Laser cutting is excellent at processing different materials”.

3. The researcher explained, “Radio waves have been used since 1931 to investigate celestial objects”.

4. The oceanographer said, “We will develop innovative techniques to restore aquatic ecosystems”.

5. The manager said, “We offer you a part-time job on your computer”.

Вправа

8. Складіть розповідь про забруднення вашого міста, району, вулиці, під їздою тощо.

TOPIC 11. Other Ecological Problems

1. Прочитайте деякі факти про тварин, що знаходяться на межі вимирання.

Pandas. Fewer than 1,000 giant pandas remain in the wild in their homeland, Western China.

Black rhinoceros. Fewer than 2,000 of them remain in the wild. That's a 95 percent decline since 1970. Most are killed for their horns, which are ground into powder for medical purposes in Asia.

Tigers. Only 67,000 wild tigers remain. Tigers are hunted and killed for their body parts, which are used in oriental medicines.

Chimpanzees. Chimps and other primates are on the verge of becoming extinct, primarily due to the destruction of tropical rain forests, which are home for 90 percent of all primates.

Elephants. In the last 20 years, half the African elephants have been killed off. The Asian elephant population has shrunk even more. Elephants are killed for their ivory tusks, most of which are used for making jewelry.

2. Визначте, чи є вірними наступні висловлювання.

1. Pandas live in India.
2. Rhinoceros are killed for their skin.
3. The horns of rhinoceros are ground into powder for medical purposes.
4. The number of wild tigers is less than 30,000.
5. Tigers are hunted for their fur.
6. Chimpanzees live in rain forests.
7. The population of African and Asian elephants has increased in the last 20 years.
8. Ivory is a precious material for making jewelry.

3. Передайте речення непрямою мовою, починаючи їх словами у дужках.

1. We'll close credit lines if you don't reduce carbon dioxide emission. (They promised)

2. You're right, some poisonous chemicals really escape into the atmosphere. (He said)
3. Are you going to call on our friends tonight? (They asked)
4. John, stand up immediately! (He ordered)
5. My friend is the best student in this school. (She said)
6. You can't use your dictionaries during the test. (The teacher warned)
7. Do you want a cup of tea? (They asked)
8. Is the bus service running according to the timetable today? (He wondered)

4. *Передайте речення непрямою мовою, використовуючи речення у дужках як головні.*

1. Where is he going? (He didn't tell anybody)
2. Where has he gone? (Did you know)
3. Where is he? (Did you know)
4. When is he leaving for abroad? (I wanted to know)
5. Where does he live? (Nobody knew)
6. When will he come back? (She asked them)
7. Where did she buy this bicycle? (He wanted to know)
8. How much did she pay for it? (I had no idea)
9. Have you found the book? (She asked me)
10. Are there any more books here? (The man asked)
11. Did she go shopping yesterday? (I wanted to know)
12. Has she bought the dictionary? (He did not ask her)
13. Does she know the name of the man? (I doubted)

TOPIC 12. Spray-On Solar-Power Cells Are True Breakthrough

Scientists have invented a plastic solar cell that can turn the sun's power into electrical energy, even on a cloudy day. The plastic material uses nanotechnology and contains the first solar cells able to harness the sun's invisible, infrared rays. It is a real breakthrough! The theorists predict that plastic solar cells could one day become five times more efficient than current solar cell technology.

Like paint, the composite can be sprayed onto other materials and used as portable electricity. A sweater coated by the material could power a cell phone or other wireless devices. A hydrogen-powered car painted with the film could potentially convert enough energy into electricity to continually recharge the car's battery.

The researchers envision that one day "solar farms" consisting of the plastic material could be rolled across deserts to generate enough clean energy to supply the entire planet's power needs.

"The sun that reaches the Earth's surface delivers 10,000 times more energy than we consume", said Ted Sargent, an electrical and computer engineering professor at the University of Toronto. Sargent is one of the inventors of the new plastic material. "If we could cover 0.1 percent of the Earth's surface with [very efficient] large-area solar cells", he said, "we could in principle satisfy all of our energy needs with a source of power which is clean and renewable".

Infrared Power

Plastic solar cells are not new. But existing materials are only able to harness the sun's visible light. While half of the sun's power lies in the visible spectrum, the other half lies in the infrared spectrum.

The new material is the first plastic composite that is able to harness the infrared portion.

"Everything that's warm gives off some heat", Sargent said. "So there actually is some power remaining in the infrared spectrum, even when it appears to us to be dark outside".

The researchers combined specially designed nano-particles called quantum dots with a polymer to make the plastic that can detect energy in the infrared. With further advances, the new plastic "could allow up to 30 percent of the sun's radiant energy to be harnessed, compared to 6 percent in today's best plastic solar cells", said Peter Peumans, a Stanford University electrical engineering professor, who studied the work.

Electrical Sweaters

The new material could make technology truly wireless. Sargent said that the plastic coating could be woven into a shirt or sweater and used to charge an item like a cell phone. "A sweater is already absorbing all sorts of light both in the infrared and the visible", said Sargent. "Instead of just turning that into heat, as it currently does, imagine if it were to turn that into electricity".

Other possibilities include energy-saving plastic sheeting that could be spread on a rooftop to supply heating needs, or solar cell window coating that could let in enough infrared light to power home appliances.

1. Доповніть текст необхідними відносними займенниками.

During your holidays, ___ you go somewhere with your friends, you usually take a lot of things with you. Though, your holiday suitcase is never big enough, is it? And there isn't a place ___ you can put bulky items like a sleeping bag. Well, there is a simple solution: take a rope or a scotch and attach it to your suitcase. On holiday you put all the clothes ___ you have worn into old bags before you take them home. And when you get home, your brother says “___ T-shirt is this, yours or mine?” Correct? Well, here are some attractive bags ___ come in different sizes for different clothes. There are people ___ like to read late at night on holiday and there are other people ___ want to go to sleep. Here is the answer. It's a little reading light ___ you put behind the book while you are reading.

2. Вставте that, who, what.

1. Tell me ___ you want and I will try to help you. 2. Why do you blame me for everything ___ goes wrong in our group? 3. Maria is the only person ___ understands me. 4. Why do you always disagree with anything ___ I say? 5. She gives her children everything ___ they want. 6. This is an awful film. It's the worst one ___ I've ever seen. 7. I won't be able to do very much but I'll do the best ___ I can. 8. Nobody knows ___ kind of work is being carried out in that laboratory.

3. Передайте непрямою мовою. 1. *Mike hasn't come to school today.* – *The teacher says that Mike hasn't come to school today.* 2. *Are you going anywhere for the weekend?* – *Tom asked me ___.* 3. *I'm really angry with you for what you've done.* – *Hannah said that ___.* 4. *How long has Paul Brown been living in this street?* – *The police officer asked ___.* 5. *The police will probably want to question me.* – *The director thought that ___.* 6. *I was in love with Judith once.* – *He confessed that ___.* 7. *I have a lot of pets at home: a dog, a cat and some budgies.* – *Anna says that ___.* 8. *Have you met Kate before?* – *Mike wanted to know ___.*

4. Розкажіть про тварин з тексту, використовуючи такі фрази. Не забудьте вжити правило узгодження часів.

1. I learned that ...
2. It was reported that ...
3. It turned out that ...
4. Scientists warned that ...
5. It appeared that ...

5. Визначте типи підрядних речень та перекладіть їх.

- a) 1. That it is possible to convert heat to energy and energy back to heat can be demonstrated in a number of ways. 2. When we will start a new series of experiments is not settled yet. 3. Whether the spaceship will be able to leave the earth depends upon the speed of the ship.
- b) 1. One of the main characteristics of plastics is that their molecules are composed of a large number of repeating molecules known as monomers. 2. The most important feature of this plant is that all its shops are equipped with automatic and semi-automatic machine-tools. 3. The difficulty is whether all the processes of the production at the plant can be mechanized.
- c) 1. I know when he will return home. 2. We didn't understand what had happened. 3. They said they knew about his arrival. 4. She couldn't even imagine where she had put her glasses.

d) 1. At the next table in the cafe I noticed the guy whose photo I saw yesterday in the newspaper. 2. She didn't explain the reason why she was absent. 3. The house we live in has been renovated recently. 4. The girl who is sitting next to me is my friend's sister.

e) 1. As soon as you arrive home, please, send us an E-mail. 2. He will be waiting until you come to a decision. 3. When she comes to Australia she will see a lot of exotic animals. 4. Look before you leap.

6. Заповніть пропуски словами, що підходять за змістом:

man, months, discovered, wars, evolved, only, appear, information, riches, Earth, ago, known, extinction, huge, system.

Planet Earth Is 4,600 Million Years Old If we pretend that our planet is like a person, we can compare the Earth with a man of 46 years of age. Nothing is ___ (1) about the first 7 years of this person's life, and very little ___ (2) can be found about his youth. What we know for sure is that ___ (3) at the age of 42 the Earth began to flower. Dinosaurs and the great reptiles did not ___ (4) until one year ago, when the planet was 45. Mammals arrived only eight ___ (5) ago. In the middle of the last week man-like apes ___ (6) into ape-like men. And only last weekend the ice age enveloped the ___ (7). Modern ___ (8) has been around for only four hours. During the last hour Man ___ (9) agriculture. The industrial revolution began only a minute ___ (10). During those sixty seconds of biological time, Man has made ___ (11) rubbish dump out of Paradise. Man has caused the ___ (12) of 500 species of animals, robbed the planet of its mineral ___ (13), and now stands at the brink of a war to end all ___ (14) which will destroy this oasis of life in the solar ___ (15).

Таблиця неправильних дієслів (Irregular verbs)

Verb/Infinitive	Past Simple	Past Participle	Translation
1. arise	arose	arisen	виникати, з'являтися
2. awake	awoke	awoken	прокидатися, будити
3. be	was/were	been	бути
4. bear	bore	born	носити, народжувати
5. beat	beat	beaten	бити
6. become	became	become	ставати
7. begin	began	begun	починати
8. bet	bet	bet	битися об заклад
9. bind	bound	bound	зв'язувати
10. bite	bit	bitten	кусатися
11. bleed	bled	bled	кровоточити
12. blow	blew	blown	дуги
13. break	broke	broken	ламати
14. breed	bred	bred	розводити
15. bring	brought	brought	приносити
16. build	built	built	будувати
17. burn	burn/burned	burnt/burned	палити
18. burst	burst	burst	вибухати, розривати
19. buy	bought	bought	купувати
20. cast	cast	cast	кидати
21. catch	caught	caught	ловити
22. choose	chose	chosen	вибирати
23. come	came	come	приходити
24. cost	cost	cost	коштувати
25. cut	cut	cut	різати
26. dare	dared	dared	сміти, наважуватись
27. deal	dealt	dealt	мати справи
28. dig	dug	dug	копати, рити
29. do	did	done	робити
30. draw	drew	drawn	тягти, креслити
31. dream	dreamt	dreamt	мріяти, бачити сон
33. drink	drank	drunk	пити
34. drive	drove	driven	водити, керувати
35. dwell	dwelt	dwelt	жити, мешкати
36. eat	ate	eaten	їсти
37. fall	fell	fallen	падати

38. feed	fed	fed	годувати
39. feel	felt	felt	відчувати
40. fight	fought	fought	боротися
41. find	found	found	знаходити
42. fly	flew	flown	літати
43. forbid	forbade	forbidden	забороняти
44. forecast	forecast	forecast	передбачати, завбачати
45. foresee	foresaw	foreseen	передбачати
46. forget	forgot	forgotten	забувати
47. forgive	forgave	forgiven	прощати
48. freeze	froze	frozen	морозити
49. get	got	got	отримувати
50. give	gave	given	давати
51. go	went	gone	ходити
52. grow	grew	grown	рости, вирощувати
53. hang	hung	hung	вішати, висіти
54. have	had	had	мати
55. hear	heard	heard	чути
56. hide	hid	hidden	ховати(ся)
57. hit	hit	hit	ударяти
58. hold	held	held	тримати
59. hurt	hurt	hurt	поранити, завдати боля
60. keep	kept	kept	тримати
61. kneel	knelt	knelt	стояти навколошки
62. knit	knit/knitted	knit/knitted	в'язати, з'єднувати
64. know	knew	known	знати
65. lay	laid	laid	класти
66. lead	led	led	вести, керувати
67. lean	leant/leaned	leant/leaned	нахиляти(ся)
68. leap	leapt	leapt	стрибати
69. learn	learnt	learnt	вчити
70. leave	left	left	залишати
71. lend	lent	lent	позичати
72. let	let	let	дозволяти, пускати
73. lie	lay	lain	лежати
74. light	lit	lit	запалювати
75. lose	lost	lost	губити
76. make	made	made	робити
77. mean	meant	meant	означати

78. meet	met	met	зустрічати
79. mislead	misled	misled	вводити в оману
80. misspell	misspelt	misspelt	робити орфогр.помилки
81. misunderstand	misunderstood	misunderstood	неправильно розуміти
82. overcome	overcame	overcome	перемагати
83. partake	partook	partaken	підслуховувати
84. pay	paid	paid	платити
85. prove	proved	proved/proven	доводити
86. put	put	put	класти
87. read	read	read	читати
88. rebuild	rebuilt	rebuilt	відбудовувати
89. retell	retold	retold	переказувати
90. rewrite	rewrote	rewritten	переписувати
91. rid	rid	rid	звільняти, позбавляти
92. ride	rode	ridden	їхати верхи
93. ring	rang	rung	дзвонити
94. rise	rose	risen	сходити, вставати
95. run	run	run	бігти
96. say	said	said	казати
97. see	saw	seen	бачити
98. seek	sought	sought	шукати
99. sell	sold	sold	продажувати
100. send	sent	sent	відсылати
101. set	set	set	ставити, розміщувати
102. shake	shook	shaken	трусити
103. shine	shone	shone	світити, блищати
104. shoot	shot	shot	стріляти
105. show	showed	shown/showed	показувати
106. shut	shut	shut	закривати(ся)
107. sing	sang	sung	співати
108. sink	sank	sunk/sunken	тонути
109. sit	sit	sit	сидіти
110. sleep	slept	slept	спати
111. slide	slid	slid	ковзати
112. smell	smelt/smelled	smelt/smelled	відчувати запах
113. sow	sowed	sown/sowed	сіяти
114. speak	spoke	spoken	розмовляти
115. speed	sped	sped	поспішати
116. spell	spelt/spelled	spelt/spelled	читати по літерах
117. spend	spent	spent	витрачати

118. spill	spilt/spilled	spilt/spilled	розливати
119. spin	spun	spun	прясти
120. spoil	spoilt/spoiled	spoilt/spoiled	псувати
121. spread	spread	spread	поширювати, простягати
122. spring	sprang	sprung	стрибати
123. stand	stood	stood	стояти
124. steal	stole	stolen	красти
125. stick	stuck	stuck	додержуватися
126. stride	strode	stridden	крокувати
127. strike	struck	struck	бити, страйкувати
128. string	strung	strung	зав'язувати, натягувати
129. strive	strove	striven	намагатися, старатися
130. sunburn	sunburned	sunburned	загорати
131. sweep	swept	swept	підмітати
132. swim	swam	swum	плавати
133. swing	swung	swung	коливати, хитати
134. take	took	taken	брати
135. teach	taught	taught	навчати
136. tear	tore	torn	рвати
137. tell	told	told	казати
138. think	thought	thought	думати
139. throw	threw	thrown	кидати
140. undergo	underwent	undergone	зазнавати
141. understand	understood	understood	розуміти
142. undo	undid	undone	розв'язувати, розстібати
143. upset	upset	upset	засмучувати
144. wake	woke	woken	будити, прокидатися
145. wear	wore	worn	носити
146. weep	wept	wept	плакати
147. win	won	won	перемагати
148. wind	wound	wound	заводити годинник
149. withdraw	withdrew	withdrawn	відклікати
150. write	wrote	written	писати

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