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Підручник призначенний для використання у процесі іншомовної фахової підготовки студентів ВНЗ, що навчаються за напрямом «Екологія». Навчальні матеріали, структуровані за тематичним принципом у 10 розділах і 3 додатках, відображають основні проблеми сучасної екологічної науки. Система вправ і завдань, представлена у межах розділів за видами мовленневої діяльності, націлена на розвиток відповідних знань, умінь і навичок, що є компонентами іншомовної професійної компетентності студентів, зокрема – таких її субкатегорій, як іншомовна комунікативна, функціональна, стратегічна, лексична, граматична компетенції.

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This textbook is designed to help the 1st and 2nd year students majoring in Ecology at the Faculties of Sciences master their communicative competence in the professional field on the basis of important concepts presented in the textbook. It could be used both as a learning tool for students and as a teaching tool for professors. The need for these types of studying materials has emerged from the lack of specific studying materials for this target group of students. Our personal teaching experience has allowed to use these materials in practice and adjust them to students’ needs.

The main objectives of the course is to improve basic language skills (mainly speaking, reading and writing based on knowledge of certain vocabulary items and grammar constructions) with pre-intermediate and intermediate students. The textbook offers tasks according to different levels of students’ communicative competence.

Presented studying materials are designed to cover 3-4 semester course. It consists of 10 units with a special focus on the topics related to students’ field of study. 3 appendices provide resources highlighting essential grammar structures, specially designed or adapted texts, tasks for self-studying and glossary.

The layout of each unit is typical. As we aimed to develop students’ basic language skills, the structure of the course reflects this major goal. The topic of each unit is introduced with a small speaking task (usually some problem questions for discussion). The first stage is to elicit any ideas students might have about the topic dealt with and gradually concentrate on the vocabulary used with this topic. Again vocabulary appears in the reading part and vocabulary notes in order to familiarize students with new lexical units and present new learning material. Vocabulary-in-use and English-in-use activities are aimed at enhancing students’ knowledge, improving their skills and abilities while working with new studying material. Each unit of the textbook contains grammar exercises incorporated in Grammar-in-use section and different written projects and tasks involving oral presentations.

Since we haven’t been specially educated in ecology, our main resources were reliable internet websites dealing with urgent environmental problems, direct cooperation with professionals in the field, discussions and confrontation with students majoring in ecology.

At the end of the course students are to demonstrate intermediate and upper-intermediate level of communicative competence in speaking on ecological topics, writing summaries and reports, manipulating data, exploring different aspects of ecology in more detail, interpreting results from real experiments, analyzing simple model systems.

Welcome to the world of ecology!
UNIT 3. Air Pollution

Speaking
Questions for discussion:
1. What is air pollution?
2. What are the causes of air pollution?
3. What can air pollution lead to?

Reading
Task 1. Reading Passage has seven paragraphs A-G. Which paragraph mentions the following (I- XII). There are 5 choices you do not need to use.
List of statements.

I  Deposits of coal.
II  Health of our children.
III  Increase in lead levels.
IV  Global climate change.
V  People died because of weather anomaly.
VI  Importance of carbon dioxide.
VII  The formation of clouds.
VIII  Official attention to the problems.
IX  Too many deaths from smog.
X  Composition of smog.
XI  Industrial companies are in the blame for polluted air.
XII  Efforts concerning coal burning failed.

Paragraph A  .....  
Example  Paragraph B Answer V  
Paragraph C  .....  
Paragraph D  .....  
Paragraph E  .....  
Paragraph F  .....  
Paragraph G  .....  

Read the text and do the following exercises. Pay attention to prepositions, word-forms and articles.

**Air Pollution**

A  
Human activity affects our atmosphere. Air pollution has become one of the main problems all over the world. The growth of population centres coupled with the switch from wood-burning to coal-burning fires created clouds of smoke over cities as early as the eleventh century. Air pollution regulations first appeared on England in 1273, but for the next several centuries, attempts at controlling the burning of coal met with notable failure. The problem was not confined to London, nor was it confined to England. As the Industrial Revolution swept across countries, and as coal became common in private residences, smoke and industrial pollution claimed more and more lives. In the United States, Donora, Pennsylvania, became famous for a tragedy that symbolized the dangers of industrial air pollution.

B  
On October 26, 1946, a thick, malodorous fog enveloped the small industrial town. Unlike usual fogs, it did not burn off as the day progressed. Instead, it stayed on the ground for five days. Twenty people died in Donora and 7,000 were hospitalized with respiratory problems. The cause was a weather anomaly that trapped toxic waste emissions from the town’s zinc smelting plant close to the
ground. The Donora disaster brought air pollution into focus in the United States, and paved the way for the Clean Air Act, enacted in 1963 and strengthened in 1970.

C __
Between December 5 and 9, 1952, 4,000 people died in London as a result of smog in a thermal inversion (a condition when the air close to the ground is colder than the layer above it, and is therefore unable to rise above it).

D __
Millions of chimneys, buses, cars, plants, factories and other industrial enterprises emit fumes and harmful substances into the atmosphere. Poisoned air is the main reason why it is hard to breathe in large cities with big amount of plants and transport.

E __
Human activity has been increasing the concentration of such gases like carbon dioxide, methane, nitrous oxide and water vapor in the atmosphere. Scientists expect to see a doubling of carbon dioxide over pre-industrial levels around the year 2065.

Every year the atmosphere is polluted by about one thousand tons of industrial dust. Toxic wastes are made by enterprises of colour metallurgy, woodworking, pulp paper industry etc.

Various chemical elements are intensively absorbed by our organism during breathing, it is harmful to our health. Air pollution is especially harmful for quality of offsprings.

F__
All around the world, the advent of the internal combustion engine-powered vehicles compounded air pollution, adding particulate and gaseous contamination to the air people breathe. The use of leaded gasoline raised lead levels in populations around the world. Leaded gasoline was phased out in the USA starting in 1976, but is still in use in many parts of the world.

G __
In 1987, scientists discovered a hole in the ozone layer and recognized a serious threat to the layer that protects the earth from the sun’s ultraviolet radiation. The Montreal Protocol, drafted in 1987, addressed the damage caused to the ozone layer by a chemical group as CFCs in consumer and industrial products. The global climate change accord signed in Rio de Janeiro, Brazil, in 1992 addressed the so-called “greenhouse gases”, gases which trap heat in the atmosphere and lead to a global warming trend.

Scientists say that air pollution is the cause of acid rains, global warming and of greenhouse effect [11].

VOCABULARY NOTES
activity (n) – [æk'tɪvɪtɪ] – 1) діяльність; 2) активність; енергія, спритність
coupled with – зв’язаний з
regulation (n) – 1) регулювання; 2) правило; 3) пл. статут; інструкція; обов’язкові постанови
attempt (n) – спроба
notable (adj) – 1) видатний; визначний; 2) значний (за кількістю); помітний
failure (n) – невдача, неуспіх; провал
residence (n) – місце проживання; місцеперебування; резиденція
to claim lives – забирати життя
failure (n) – невдача, неуспіх; провал
be confined – бути обмеженим, обмежуватися
to sweep across country – пронестися по країні
respiration (n) – дихання
exhaust (v) – [ɪɡ'zɔːst] – 1) виснажувати, стомлювати, зморювати; 2) викачувати, витягати; випускати (пару); 3) випитувати, витягувати
fume (n) – [fjuːm] – 1) дим; кіптява; 2) пара; випар
substance (n) – [ˈsʌbstəns] – 1) речовина; 2) матерія, речовина, субстанція
industrial dust – промисловий пил
absorb (v) – [əbˈsɔːb] – вбирати; всмоктувати; абсорбувати; поглинати
emission (n) – випускання; виділення; випромінювання;
hospitalize (v) – [ˈhɒspɪtəlaɪz] – госпіталізувати, покласти в лікарню
thermal inversion – [ˈθɜːməl ɪnˈvɜːrʃən] – теплова, термічна інверсія

enterprise (n) – [ˈentəpraɪz] – 1) підприємство; 2) підприємливість, заповзятливість, ініціативність
advent (n) – ['ædvənt] – прихід, прибуття
compound (n) – ['kɒmpaʊnd] – суміш; сполучення, сполука
particulate (adj) – [pɑr'tɪkjʊlət] – 1) частковий; 2) у формі часток
gaseous (adj) – ['geɪzəs] – газовий; газоподібний
contamination (n) – забруднення
leaded gasoline – бензин з домішками свинцю
phase out (v) – перестати використовувати
recognize (v) – ['rɛkənaɪz] – 1) упізнавати; 2) визнавати; 3) висловлювати схвалення; 4) усвідомлювати
threat (n) – [θret] – загроза, погроза
draft (v) – складати план (документ, законопроект тощо)
CFCs – chlorofluorocarbon; хлор-фтор вуглеводень
accord (n) – [ə'kɔrd] – згода, злагода; гармонія, відповідність, співзвучність
greenhouse gas – парниковий газ

READING COMPREHENSION

Task 2. Answer the following questions.
1. Do people influence our atmosphere?
2. What were the reasons for clouds of smoke in the past?
3. When and where were first air pollution regulations?
4. Was air pollution the problem only of London?
5. What tragedy happened in Donora, the USA?
6. What was unusual of this fog?
7. What was the cause for it?
8. How many people died in London in 1952 because of smog?
9. Why is it difficult to breathe in large cities?
10. What is expected in 2065?
11. How many tons of industrial dust pollute our atmosphere every year?
12. When was ozone hole discovered?
13. Why is ozone layer so important to people?
14. What are “greenhouse gases”? 
15. Are acid rains, global warming and greenhouse effect caused by air pollution?

Task 3. Are the following statements true or false? If the statements are false correct them.
1. First clouds of smoke from coal-burning fires appeared in the 9th century.
2. On October 26, 1946 Donora was covered by thick fog.
3. This fog stayed on the ground for five days.
4. The town’s metallurgical plant caused that fog.
5. The Clean Air Act was enacted in 1963.
6. A condition when the air close to the ground is warmer than the layer above it is called a thermal inversion.
7. Many plants and vehicles in cities lead to respiratory problems because of poisoned air.
8. A doubling of carbon dioxide over pre-industrial levels is expected to be seen in 2050.
9. Enterprises of colour metallurgy, woodworking, pulp paper industry, etc. emit toxic wastes.
10. Leaded gasoline was introduced in the USA in 1976.
11. The ozone Layer doesn’t protect the Earth from the Sun’s ultraviolet radiation.
12. Greenhouse gases lead to global warming.

**ENGLISH-IN-USE**

**Task 4. Match two halves of the sentences.**

<table>
<thead>
<tr>
<th>1. Zinc smelting plant …</th>
<th>a) still use leaded gasoline.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Our organism absorbs …</td>
<td>b) by the ozone layer.</td>
</tr>
<tr>
<td>3. Introduction of vehicles with internal combustion …</td>
<td>c) is unable to rise above warmer layer.</td>
</tr>
<tr>
<td>4. Many countries all over the world …</td>
<td>d) chemical elements during breathing.</td>
</tr>
<tr>
<td>5. Particulate and gaseous contaminates …</td>
<td>e) paved the way for the Clean Air Act.</td>
</tr>
<tr>
<td>6. The Earth is protected from the Sun’s ultraviolet radiation …</td>
<td>f) increasing the concentration of carbon dioxide.</td>
</tr>
<tr>
<td>7. Donora disaster …</td>
<td>g) is one of the main problems all around the world.</td>
</tr>
<tr>
<td>8. The small industrial town …</td>
<td>h) was blamed for toxic waste emissions.</td>
</tr>
<tr>
<td>9. Human activity has been ..</td>
<td>i) by air pollution.</td>
</tr>
<tr>
<td>10. Air pollution …</td>
<td>j) are added to the air we breathe.</td>
</tr>
<tr>
<td>11. The air close to the ground …</td>
<td>k) compounded air pollution.</td>
</tr>
<tr>
<td>12. Global warming is caused …</td>
<td>l) was enveloped by fog.</td>
</tr>
</tbody>
</table>

**Task 5. Choose the most appropriate item to complete the sentences (according to the text).**

1. The Donora disaster ___
   A  saved many people.
   B  brought air pollution into the focus in the USA.
   C  helped people with respiratory problems.
2. For the next several centuries attempts ___
   A  claimed many lives.
   B  for control concerning coal burning met failures.
   C  at controlling coal burning failed.
3. When scientists discovered a hole in the ozone layer ___
   A  they reported that it was a serious threat to the layer.
   B  they didn’t pay attention to it.
3. they were happy to solve this problem.

4. Smoke and industrial pollution claimed more and more lives ___
   A before the introduction of coal.
   B when Industrial Revolution swept roads.
   C when people began to use coal at home.

5. Cars, plants and factories are blamed ___
   A for polluting air by emissions.
   B on pollution by exhaustions.
   C to make the air cleaner.

6. London fog is known ___
   A to kill many people.
   B to have taken place on October 26, 1946.
   C to have killed 4,000 people.

7. Scientists claim that ___
   A acid rains are good to health.
   B global warming, greenhouse effect and acid rains are caused by air pollution.
   C air pollution is not responsible for respiratory problems.

Vocabulary-in-Use

Task 6. Choose one of the words (according to the text).

1. Tornado _____ everything on its way.
   a) sustained    b) swept    c) swapped    d) made    e) sweeping

2. The use of this element was _____ in 1950.
   a) brought into    b) coupled    c) phased out    d) suffered    e) phased on

3. Mist stayed on the _____ for several days.
   a) ground    b) place    c) city    d) village    e) country

4. This event _____ the way for the Act.
   a) made    b) cobbled    c) covered    d) caused    e) paved

5. Such problem was brought into _____ in Ukraine.
   a) concentration    b) pavement    c) residence    d) focus    e) level

6. Tsunami _____ many lives.
   a) gave    b) reported    c) claimed    d) presented    e) announced

7. These solar panels _____ the sun’s heat.
   a) trash    b) trap    c) discover    d) carry    e) fuel

Task 7. Match synonyms.

1. reside              a) influence, have an impact
2. internal            b) coat, cover, veil, wrap
3. activity            c) growth, rise, enlargement
4. envelop            d) effort, endeavor, try
5. absorb              e) prominent, eminent, celebrated, popular
6. discover            f) inner, inside, interior
7. small               g) catch, hold back, imprison
8. advent              h) occupation, task
9. affect                  i) take in, draw in, soak up
10. attempt             j) inhabit, live, dwell
11. malodorous      k) little, tiny
12. disaster             l) find out, come to know, detect
13. famous             m) smelly, stinking, putrid, fetid
14. increase            n) beginning, introduction, launch
15. trap                   o) catastrophe, tragedy, act of God

Task 8. Match antonyms.

<table>
<thead>
<tr>
<th>Word</th>
<th>Antonym</th>
</tr>
</thead>
<tbody>
<tr>
<td>famous</td>
<td>a) decrease</td>
</tr>
<tr>
<td>small</td>
<td>b) useful</td>
</tr>
<tr>
<td>internal</td>
<td>c) large</td>
</tr>
<tr>
<td>increase</td>
<td>d) unpopular</td>
</tr>
<tr>
<td>above</td>
<td>e) weaken</td>
</tr>
<tr>
<td>strengthen</td>
<td>f) external</td>
</tr>
<tr>
<td>close</td>
<td>g) below</td>
</tr>
<tr>
<td>harmful</td>
<td>h) far</td>
</tr>
</tbody>
</table>

Task 9. Match the word on the left with its correct definition on the right.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>to phase out</td>
<td>a) to make a later event or development possible by producing the right conditions</td>
</tr>
<tr>
<td>to burn off</td>
<td>b) if one thing is … with another, they happen to exist together and produce a particular result</td>
</tr>
<tr>
<td>to pave the way for</td>
<td>c) to produce and discharge (something, especially gas or radiation)</td>
</tr>
<tr>
<td>to claim</td>
<td>d) e. x. wind, waves, storm; to move quickly and with a lot of force</td>
</tr>
<tr>
<td>be confined to</td>
<td>e) to make a difficult situation even worse by adding more problems</td>
</tr>
<tr>
<td>to couple with</td>
<td>f) to gradually stop using or providing something</td>
</tr>
<tr>
<td>to sweep across</td>
<td>g) if a war, accident, etc. … lives, people die because of it</td>
</tr>
<tr>
<td>to compound</td>
<td>h) to remove something by burning it</td>
</tr>
<tr>
<td>to draft</td>
<td>i) to make (something, especially something bad) happen</td>
</tr>
<tr>
<td>to sign</td>
<td>j) to affect or happen to only one group of people, or in only one place or time</td>
</tr>
<tr>
<td>to breathe</td>
<td>k) to move from a lower position to a higher one; come or go up</td>
</tr>
<tr>
<td>to cause</td>
<td>l) to take air into the lungs and then expel it, especially as a regular physiological process</td>
</tr>
<tr>
<td>to rise</td>
<td>m) to catch (an animal) in a trap</td>
</tr>
<tr>
<td>to emit</td>
<td>n) to prepare a preliminary version of (a document)</td>
</tr>
</tbody>
</table>
15. to trap

1. to authorize (a document or other written or printed material) by attaching a signature

---

**Grammar-in-Use**

**ADJECTIVE. COMPARATIVES AND SUPERLATIVES**

**Task 10. Underline the correct degree of comparison in the sentences below.**

1. Sadly, New York City has the 4th worse/worst ozone levels across most of the nation.
2. Air pollution is one of the most noticeable/more noticeable and common complaints of people in an urban setting.
3. The incidence of murders and violent attacks in cities are much high/higher than the statistics from smaller towns.
4. What’s the cleaner/cleanest big city in the U.S.?
5. Air is the most essential/essentialer element for all living organisms and yet, most humans play a big role on polluting this essential resource.
6. The atmospheric pollutants with the greatest/greater effect onto the environment are the carbon monoxide, carbon dioxide, hydrocarbons, sulfur dioxide, nitrogen oxides, dust particles, radioactive isotopes, and chlorofluorocarbons.
7. In fact, pollution is older/the oldest than most people realize.
8. China is the biggest/bigger CO2 polluter.
9. Current situation with our planet is more serious/the serious than ever before in our history.
10. Air is as important/more important as water.

**Task 11. Choose the most appropriate item to complete the sentences.**

1. The air is ____ polluted in cities that it is difficult to breathe.
   - A such
   - B so
   - C too
   - D enough

2. We should have ____ money to reduce air pollution.
   - A too
   - B so
   - C enough
   - D such

3. It was ____ a dirty city that no one wanted to go there.
   - A so
   - B too
   - C enough
   - D such

4. It is ____ dangerous to live in areas full of radiation.
   - A too
   - B enough
   - C such
   - D so

5. We couldn’t even believe that ____ many people died because of smog.
   - A such
   - B much
   - C so
   - D enough

**Task 12. Choose the most appropriate item to complete the sentences.**
1. The level of pollution is much ____ than it was in the past.
   a) high    b) higher    c) highest    d) as high
2. It has become ____ to live with poisoned air and water.
   a) hardest    b) the hardest    c) hardly    d) hard
3. Urban areas are ____ than rural areas.
   a) dirtier    b) dirty    c) the dirtiest    d) more dirty
4. It is much ____ to cope with air pollution.
   a) difficult    b) most difficult    c) more difficult    d) as difficult
5. Water pollution is as ____ as air pollution.
   a) more serious    b) serious    c) most serious    d) much serious
6. The more the factories emit CO2, _____ our cities become.
   a) dirty    b) the dirtier    c) the dirtiest    d) more dirtier
7. The problem of air pollution can become ____ in a hundred years.
   a) badder    b) worst    c) worse    d) as bad
8. The more time we spend in ecologically clean areas, the ____ we are.
   a) healthy    b) healthiest    c) healthier    d) much healthy
9. Is it possible to find the ____ place on the Earth?
   a) cleaner    b) most clean    c) more cleaner    d) cleanest
10. The smog was as ____ as night.
    a) dark    b) darker    c) the darkest    d) more darker

PAST TENSES

Task 13. Choose the most appropriate item to complete the sentences.
1. A thick fog ____ the small town in 1946.
   a) enveloping     b) enveloped    c) had enveloped
2. Air pollution regulations first ____ in 1273.
   a) appeared    b) have appeared    c) appearing
3. More than 50 years ago 4,000 people ____ in London because of smog.
   a) had died    b) were dying    c) died
4. Yesterday they ____ about the explosion at power station.
   a) was reported    b) reporting    c) reported
5. Scientists ____ a hole in the ozone layer in 1987.
   a) discovering    b) discovered    c) have discovered

Task 14. Choose the most appropriate item to complete the sentences.
1. It is said that scientists ____ acid rain yesterday at 5 o’clock.
   a) had observed    b) were observing    c) had been observing
2. When the power station exploded many people ____ near it.
   a) walking    b) had walked    c) were walking
3. You could see that the factory ____ some harmful substances into the air yesterday all the morning.
   a) was emitting    b) emitted    c) had emitted
4. When I looked up at the sky I saw that black clouds of smoke ____ there.
   a) had floated    b) have been floating    c) were floating
5. When people saw that the company ____ garbage into the river, they began to protest.
a) was dumping  b) dumped  c) has dumped

Task 15. Choose the most appropriate item to complete the sentences.
1. Air pollution ____ a problem by the 18th century.
a) was  b) hadn’t been  c) was being
2. Scientists ____ a hole in the ozone layer by 1990-s.
a) had discovered  b) discovered  c) were discovering
3. When the scientists saw that the lake ____ up, they began to worry.
a) has dried  b) drying  c) had dried
4. We ____ too many trees by the end of the 20th century.
a) have cut  b) had cut  c) cutting
5. The Earth ____ by 0.5 degrees Celsius by the beginning of the 21st century.
a) had warmed  b) was warming  c) will warm

Task 16. Choose the most appropriate item to complete the sentences.
1. People ____ wood fires for many years by the time they began to use coal.
a) have been burning  b) had been burning  c) were burning
2. Strong wind ____ harmful pollutants for many miles by the time they settled down on buildings.
a) had been blowing  b) was blowing  c) has blown
3. The use of leaded gasoline ____ lead levels in populations for many decades by the time it was phased out.
a) were raising  b) have raised  c) had been raising
4. Human activity ____ the concentration of such gases like carbon dioxide, methane and nitrous oxide for a very long period of time by the time this concentration became a big problem.
a) had been increasing  b) were increasing  c) increased
5. We ____ waste into our rivers, seas and oceans for so long that it became a real problem.
a) dumped  b) have been dumping  c) had been dumping

Task 17. Choose the most appropriate item to complete the sentences (all the Past tenses).
1. Government ____ strict rules last year to settle the refuse problem.
a) had introduced  b) introduced  c) has been introducing
2. When people understood that they ____ too much oil it was too late.
a) was using  b) have been using  c) had used
3. When I saw my friends they ____ leaves into general rubbish.
a) put  b) has been putting  c) were putting
4. They ____ pesticides for forty minutes by the time rain started.
a) sprayed  b) were spraying  c) had been spraying
5. Farmers ____ the use of harsh chemicals and synthetic fertilizers by the end of last century.
a) introduced  b) had introduced  c) was introducing
6. When I saw stray dogs they ____ towards me.
7. Modern lighting in streets and buildings, together with advertising signs and other light sources _____ it increasingly difficult for astronomers to study the night sky with optical telescopes.
   a) made     b) has made     c) were made

8. Too many species of animals _____ by the time the scientists found the real reason.
   a) died     b) had died     c) have died

9. He _____ out experiments for a long period of time before he found out what was really going on.
   a) had been carrying     b) was carrying     c) carried

    a) had exploded     b) exploded     c) had been exploding

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**Task 18. Fill in prepositions (from the text).**

1. There were too many clouds of smoke ___ the city.
2. Our city is famous ___ beautiful architecture.
3. During the disaster many children were hospitalized ___ respiratory problems.
4. High velocity winds swept ___ the village.
5. Emissions ___ factories do a lot of harm ___ city dwellers.
6. Disaster brought air pollution ___ focus.
7. Ann made an attempt ___ the world record.
8. Pollution is harmful ___ our health.
9. Scientists from all ___ the world will be present at the conference.
10. Many employees tried to switch ___ work at office ___ teleworking.
11. Chornobyl Catastrophe was confined not only ___ Ukraine.
12. Leaded gas was phased ___ in the 1970s.
13. The advent ___ computers facilitated people’s lives.
14. In the heatwave try to protect your skin ___ the sun.
15. Water was absorbed ___ the soil.
17. This decision paved the way ___ further legislation on civil rights.

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**Task 19. Write an appropriate form of the word in bold.**

1. After the accident the driver was _____
   HOSPITAL
2. He understood that his ____ cost a lot.
   FAIL
3. The Buckingham palace is the _____ of Queen Elizabeth.
   RESIDE
4. The ____ of prices was not taken into consideration.
   GROW
5. Air pollution leads to ____ problems.
   RESPIRATION
6. ____ tried to understand this unusual process.
   SCIENCE
7. ____ substances cause much damage.
   HARM
8. ____ progress is blamed foe so much pollution.
   INDUSTRY
9. It is difficult to ____ high in the mountains.
   BREATH
10. Everyone knows the ____ of Romeo and Juliet.
    TRAGIC
11. Human ____ is the cause of many ecological problems.  
12. ____ from cars and buses pollute air.  
13. The Clean Air Act was ____ in 1970. (verb)  

Task 20. Fill in article the where it is necessary.
1. ___ sun was shining brightly.
2. ___ Montreal Protocol was drafted in 1987.
3. She had always wanted to visit ___ England and finally she visited it last year.
4. There was emission of poisonous gases in ___ September.
5. Chornobyl disaster happened in ___ 20th century.
6. ___ Washington is the capital of ___ United States of America.
7. Nowadays people are able to travel all around ___ world.
8. ___ Industrial Revolution brought much pollution.

Task 21. Give a short written summary of the text (150 words).

Task 22. Retell the text above highlighting its main ideas.

1. Do you know any facts concerning air pollution?  
Have a look at these facts:

   Here are a few facts about air pollution:

   Almost 232 million different types of vehicles are driven by U.S. citizens every day, adding greenhouse gases into the air.
   U.S. vehicle emissions contribute 45% to global warming.
   The average adult consumes 3,000 gallons of polluted air every day.
   Vehicle exhaust contributes to 60% of carbon monoxide emissions in the U.S.A. and up to 95% in large cities.
   Every year 335,000 Americans die of lung cancer, which is a direct result of air pollution.

2. Do you find these numbers striking?
3. How can we prevent air pollution? If you do not have many ideas, read the extract below.
How to Prevent Air Pollution

The number one way to prevent air pollution is to walk or bike more and drive less. This will prevent fossil fuels from polluting the air. Here are some other ways to prevent air pollution:
- Carpool or join a ride share with friends and coworkers.
- Don’t smoke.
- Keep your car maintenance up-to-date.
- If you have to drive, do your errands at one time.
- Avoid using lighter fluid when barbecuing outside.
- When you drive, accelerate slowly and use cruise control.
- Always replace your car’s air filter.
- Use a push or electric lawnmower rather than a gas-powered one.
- Don’t use harsh chemical cleaners that can emit fumes.
- Inspect your gas appliances and heaters regularly.

Higher level

Vocabulary-in-Use

Task 23. Put each of the following words in its correct place in the passage below.

factory eruption cigarette step rise
phenomena plants road cloud

The moment you (1) ______ out of the house and are on the (2) ______ you can actually see the air getting polluted; a (3) ______ of smoke from the exhaust of a bus, car, or a scooter; smoke billowing from a (4) ______ chimney, fly ash generated by thermal power (5) ______, and speeding cars causing dust to (6) ______ from the roads. Natural (7) ______ such as the (8) ______ of a volcano and even someone smoking a (9) ______ can also cause air pollution.

English-in-Use

Task 24. Read the passage below. For gaps (1-10) choose the correct answer (A, B, C or D).

Air pollution was first (1) ______ as problem of city (2) ______, poisoning themselves, but more recently, air pollution is (3) ______ as a problem of global (4) ______. The tolerance for environmental destruction is (5) ______ and human history is (6) ______ with civilizations that failed because humans (7) ______ natural
resources and spoiled their own nest. Humans adapt (8) _______ to deteriorating conditions and will (9) _______ in following daily routines even when air pollution is severe, traffic is congested, water and food supplies are at risk, and social order is (10) _______.

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<th>A</th>
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<th>C</th>
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<td>unstable</td>
<td>safe</td>
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Task 25. Some parts of the text are missing. Choose the most appropriate part from the list (A-N) for each gap (1-7) in the text. There are 7 extra parts you do not need.

Airborne chemicals contaminate food and (1) _______. Airborne chemicals are ingested; they collect (2) _______ and throat and are swallowed, often in mucus that (3) _______ protect exposed surfaces. Airborne chemicals (4) _______ the digestive system (5) _______ well-known toxins (6) _______ pesticides, organophosphate, dioxin, arsenic, cadmium, lead, and mercury. (7) _______, exposures to airborne pathogens can be intense and can cause cancer.

A make up
B attempts to
C Although
D entering
E water sources
F so as
G in the nose
H attempts in
I In addition
J water springs
K on the eyes
L such as
M include
N entered

Task 26. Find one extra word in each line.

<table>
<thead>
<tr>
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<th>The health of our lungs and entire the respiratory system is been affected by the quality of the air we breathe. In addition to oxygen, this air does contain other substances such as pollutants, which can be harmful. Exposure to much chemicals by inhalation can negatively have affect our lungs and other organs in the body. The respiratory system is being particularly sensitive to air pollutants so because much of it is made up of exposed membrane. Lungs are anatomically structured to have bring large quantities of air (on average, 400 million litres in whole</th>
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<td>_______</td>
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Task 27. Write only one word in each gap.

Lung tissue cells can (1) ___ injured directly by air pollutants such as (2) ___ ozone, metals and free radicals. Ozone can damage the alveoli -- the individual air sacs (3) ___ the lung where oxygen and carbon dioxide (4) ___ exchanged. More specifically, airway tissues which are rich (5) ___ bioactivation enzymes can transform organic pollutants (6) ___ reactive metabolites and cause secondary lung injury. Lung tissue has an abundant blood supply (7) ___ can carry toxic substances and their metabolites (8) ___ distant organs. In response (9) ___ toxic insult, lung cells also release a variety (10) ___ potent chemical mediators that may critically affect the function of other organs (11) ___ as those of the cardiovascular system. This response may (12) ___ cause lung inflammation and impair lung function.

Task 28. Circle the correct word.

While ambient air pollution is a (1) mayor/major concern, indoor air can be (2) more/much polluted (3) then/than outdoor air. (4) Built/Building materials and furnishings are a (5) source/reason of volatile chemicals. A decrease in indoor air (6) quantity/quality is the result of reduced (7) ventilating/ventilation and efficient construction (8) practices/practises, sealing homes, stores and office buildings from the outdoor environment.

Speaking

Task 29. Read the quotation below.

We travel together, passengers on a little space ship, dependent upon its vulnerable reserves of air and soil. all committed for our safety to its security and peace; preserved from annihilation only by the care, the work, and I will saw the love that we give to our fragile craft.

Adlai Stevenson

In a small group discuss its main idea with the focus on air pollution. Then make an oral presentation concentrating on its threats and possible ways to reduce it.

Writing

Task 30. Write an essay (using the words from the text) concerning air pollution in your country or city. While writing try to answer the following questions:
1. Are there any plants or factories that emit poisonous gases into the air?
2. How do these poisonous gases influence people?
3. What actions are taken to reduce these emissions?
4. What would you offer to reduce such emissions?
5. What other things pollute the air in your city or country?

Task 31. Translate into English.

Atmospheric air — one of the most important natural resources, without which life on Earth would be absolutely impossible. Atmospheric oxygen O2, necessary for the breathing of people, animals, the majority of plants and microorganisms. The organism of people and animals needs a constant supply of oxygen. The main source of oxygen formation — this is photosynthesis of green plants. It is estimated that plants annually release about 70 billion tons of oxygen. About 80% of all oxygen in the atmosphere is supplied by marine phytoplankton, 20% is produced by land vegetation.

Self-study
Look at the text bank (Appendix 2). Read the text and do the exercises.