



Министерство науки и образования Украины
Севастопольский национальный технический университет

POLLUTION

Методические указания
к практическим занятиям по дисциплине
"Английский язык" для студентов II курса
специальности 0708 "Экология"
всех форм обучения

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POLLUTION. Методические указания к практическим занятиям по дисциплине "Английский язык" для студентов II курса специальности 0708 "Экология" всех форм обучения. / Сост. В.М. Савченко. - Севастополь: Изд-во СевНТУ, 2005. – 16 с.

Целью методической разработки является активизация и совершенствование речевых умений и навыков в процессе изучения профессионально ориентированных текстов, умений и навыков перевода оригинальной литературы.

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1. TEXT A "Pollution"

1. Nowadays the quality of life became more than a phrase; environmental and pollution became everyday words; and ecology became almost a religion to some of the people.

Progress in environmental problems is impossible without a clear understanding how the economic system works in the environment.

We can say that pollution was a problem long ago. As early as A.D.61, the philosopher Seneca was complaining about the smoky air emitted from household chimneys in Rome. And historians remind us that open sewers running down the streets were the principal mode of urban waste disposal and that typhoid epidemics were a penalty for water pollution. So we cannot say that pollution is a new phenomenon.

2. People have come to recognize that pollution imposes direct costs on the economy.

Pollution destroys health and thus reduces labour force activity and output. Pollution destroys capital (for instance, air pollution effects steel structures) and diverts resources to undesired activities (car washes, laundry and cleaning). Pollution directly reduces our social welfare by denying us access to clean air and water.

On the other hand, controlling pollution is costly, too. To clean up sewage, car exhausts, and smoke stains, we have to employ scarce factors of production to build, install, and maintain antipollution equipment.

Let us consider three main forms of pollution: air, water and land pollution. We shall start with air pollution.

3. Clouds of factory smoke above our cities used to be a sign of growth and prosperity. But now we know that health can be seriously harmed and property damaged by air pollution and that it costs a lot each year. Polluted air causes breathing-related diseases including bronchitis, asthma and lung cancer.

Polluted air dirties our clothing, our buildings and our homes. Does this cost society money? Air pollution, by stunting the growth of plants and trees, also reduces agricultural productivity and adds to the price people must pay for food.

4. Burning fossil fuel in cars and factories releases pollutants into the air. Then dust and moisture combine in the atmosphere to form acids in clouds, and eventually there is an acid rainfall or snowfall. The results are deadly. Acid rain kills fish and plants in lakes, it also builds up in the soil and damages crops. It



wears away building surfaces. Blown by winds, the acid rain may fall far from the source of pollution. Acid rain caused by pollutants in our country may fall on other countries. Pollution costs all of us something. It is true that if there were no pollution controls the products we buy could be cheaper, and consumers would benefit from the lower prices. However, all society would be subsidizing those who caused the pollution by putting up with dirty and harmful air and water.

1.1 EXERCISES

Exercise 1. Suggest the Russian equivalents.

a phrase
pollution
to control pollution
a source of pollution
a philosopher
a historian
a principal mode
a typhoid epidemic
a penalty for water pollution
a new phenomenon (pl phenomena)
to destroy health (capital, labor force activity)
to effect steel structures
to build antipollution equipment
to install equipment
to reduce agricultural productivity
to add to the price
to damage crops
acid rainfall
to subsidize smb.

Exercise 2. Listen to the words and expressions, repeat them after the speaker; guess about their meanings, using their synonyms and definitions.

1. sewage = having a bad smell liquid material
2. sewer = underground channel(pipeline) or construction of brick or concrete to carry off sewage
3. to divert (resources) = to turn to another direction
4. scarce (factors) = not available in sufficient quantity = not equal to the demands
5. to emit = to give out = to send
6. to release = to allow to go = to set free

7. to stunt (the growth) = to halt = to slow down the growth
8. to employ = to make use of smth.
9. to build up = to accumulate
10. to put up with smth. = to bear patiently = to endure

Exercise 3.

1. Listen to the first part of the text and tell what the author proves in it.
2. Listen to the second part of the text and answer the questions:
 - a. How does pollution influence our economy and life?
 - b. What can you tell about antipollution equipment?
3. Listen to the third part of the text and tell what analysis the author gives in this part.
4. Listen to the rest part of the text and answer the question:
 - a. What is the origin of acid rainfalls?
 - b. What are their consequences?
5. Listen to the text once more and write down a short plan of the text, retell the text.

Exercise 4. Read the text and find the sentences with the following words and expressions, read them and translate

to complain about smth.
to be a penalty for smth.
to reduce one's social welfare
to clear car exhaust
to harm health
to burn fossil fuel
to build up in the soil
to be caused by pollutants

Exercise 5. Find the English equivalents for the following in the text.

Отвлекать ресурсы, нежелательная деятельность, лишить доступа, обслужить оборудование по борьбе с загрязнением окружающей среды, очистить сточные воды, смертельные результаты, стирать строительный слой (поверхность), выбрасывать загрязняющие вещества в воздух, контроль за загрязнением, смириться с грязным и вредным воздухом.

Exercise 6. Match the English and Russian equivalents.

- | | |
|--------------------------------|-----------------------------------|
| 1. to cause breathing diseases | 1. примириться с грязным воздухом |
| 2. to be a sign of growth and | 2. быть признаком роста и |



prosperity	процветания
3. to add to the price	3. вызывать болезни дыхательных путей
4. to benefit from lower prices	4. падать далеко от источника загрязнения
5. to fall far from the source of pollution	5. получать выгоду от более низких цен
6. to put up with dirty and harmful air	6. увеличивать цены

Exercise 7. Translate the sentences into Russian.

1. Pollution diverts resources to undesired activities (car washes, laundry and cleaning)
2. Then dust and moisture combine in the atmosphere to form acid in clouds, and eventually there is an acid rainfall or snowfall.
3. It is true that if there were no pollution controls the products we buy could be cheaper, and consumers would benefit from the lower prices.
4. However, all society would be subsidizing those who caused the pollution by putting up with dirty and harmful air and water.

Exercise 8. Fill in the right word from the list below.

1. Health can be seriously – by air pollution.
 2. Pollution – breathing related diseases.
 3. Air pollution – agricultural productivity.
 4. Air pollution – the growth of plants and trees
 5. Environmental pollution – our welfare.
 6. Property can be – by air pollution.
- to damage, to stunt, to harm, to cause, to reduce.

Exercise 9. Answer the questions.

1. What does the quantity of life depend upon nowadays?
2. Is pollution an old problem?
3. What have we to do to control pollution?
4. What are the main forms of pollution?
5. Why does pollution cost our society money?
6. Why does air pollution reduce agricultural productivity?
7. What is the origin of acid rains?
8. What are their consequences?

Exercise 10. Retell the text A.

2. Text B "Water pollution"

Water is considered polluted when it cannot be used for its intended purpose, such as drinking, recreation, farming, or manufacturing. Pesticides and chemical fertilizers used by farmers and home owners pollute streams, rivers, and ground water when they are transported by rain-water runoff. Sewage sludge and detergents add to water pollution near population centers. Strip-mining of coal causes acid to run off into neighboring streams and rivers, and acid rain adds to water pollution.

Industries use enormous amounts of water in manufacturing processes. The waste-water may contain metallic solids, oils, acids, organic solids, or a variety of other pollutants. Some factories discharge heated water back into rivers; this is called thermal pollution.

Organic pollution which is the most common form of water pollution occurs in the disposal of organic wastes. The most typical sources of organic waste are the bathroom toilet and the kitchen garbage disposal. The wastes are collected in sewer system and discharged into the nearest waterway.

Notes:

chemical fertilizers – химические удобрения
 sewage ['sju:ɪdʒ] sludge – отстой нечистот (сточных вод)
 strip – mining of coal – открытая добыча угля
 wastewater – отработанные воды
 disposal – размещение, удаление, избавление, зд. место размещения
 discharge [dɪs'tʃɑ:dʒ] – спускать, выливать
 sewer system – канализационная система
 detergent – моющее средство

2.1 EXERCISES

Exercise 1. Guess about their meanings.

to manufacture (manufacturing)
 to transport
 to contain
 farmer (farming)
 pesticide
 to transport smth.
 thermal pollution
 source of pollution
 to collect



Exercise 2. Give Russian equivalents for the following from the text.
to add to the water pollution, organic solid, metallic solid, rain–water runoff, kitchen garbage disposal, to discharge heated water

Exercise 3. Find English equivalents for the following.
занятие сельским хозяйством, химические удобрения, отходы, источник органических отходов, удаление кухонного мусора, канализационная система

Exercise 4. Match attributes with their nouns.

- | | |
|---------------------|----------------------------|
| 1. Common | a. purpose |
| 2. Intended | b. form of water pollution |
| 3. Enormous | c. sources |
| 4. The most typical | d. amounts of water |
| 5. Neighboring | e. rains |
| 6. Acid | f. streams and rivers |
| 7. Nearest | g. water |
| 8. Heated | h. water way |

Exercise 5. Fill in the verbs from the list below.

1. Organic pollution – of water pollution.
2. Organic pollution – in the disposal of organic wastes.
3. Kitchen garbage disposal – of organic pollution.
4. Wastewater discharged into rivers –to water pollution.
5. Industries – enormous amounts of water in manufacturing processes.

to add, to use, to be the most common form, to be the source, to occur

Exercise 6. Close the right column and translate the left column into Russian. Then, close the left column and translate the right column into English.

- | | |
|---|---|
| 1. When water is polluted it cannot be used for drinking. | 1. Когда вода загрязнена, ее невозможно использовать для питья. |
| 2. Farmers use pesticides and chemical fertilizers. | 2. Фермеры используют пестициды и химические удобрения. |
| 3. Pesticides and chemical fertilizers are transported by rain-water runoff | 3. Пестициды и химические удобрения переносятся дождевыми потоками. |
| 4. They pollute streams, rivers and | 4. Они загрязняют ручьи, реки и |

ground waters.

5. When mining coal neighboring streams and rivers are polluted with acid which runs off into them.

6. Sewage sludge and detergents add to water pollution.

7. Bathrooms, toilets and kitchens are sources of organic pollution.

подземные воды.

5. При добыче угля соседние ручьи и реки загрязняются кислотой, которая в них стекает.

6. Отстои нечистот и моющие средства увеличивают загрязнение воды.

7. Ванные, туалеты, кухни являются источниками органического загрязнения.

Exercise 7. Answer the questions to the text.

1. When is water considered polluted?
2. How do farmers and home owners pollute streams, rivers and ground water.?
3. What are the sources of water pollution?
4. What can you tell about wastewater?
5. What is thermal pollution?
6. What wastes are collected in sewer system and discharged into the nearest waterway?

Exercise 8. Retell the text B.

3. TEXT C "LAND POLLUTION"

Modern technology produces massive amounts of wastes. Unlike ordinary household and commercial garbage that can be safely disposed in open pits or other types of dumps, industrial wastes are often toxic (poisonous). The disposal of these wastes has created thousands of hazardous dump sites all across the countries. Wastes deposited at these sites have contaminated the land, air, and ground-water in the immediate area and threaten the health and well-being of those who live nearby.

The nuclear weapons plants are an environmental nightmare. Underground tanks have been leaking radioactive plutonium. Hazardous wastes stored in unlined pits have been seeping into the groundwater. The cost of cleaning up the mess has been estimated as an enormous sum. Unfortunately, even if the governments could afford the cost of the cleanup, some areas would have to be permanently removed from public or private use because no one really knows how to clean them up.



3.1 EXERCISES

Exercise 1. Guess about the meaning of these words.
 to estimate = to calculate the cost, value, size, etc of
 hazardous [hæʤəðs] = risky = dangerous
 pit = large hole in the earth
 dump = place where rubbish may be unloaded and left
 to contaminate = to make dirty, impure
 immediate = nearest
 area = region of the earth's surface
 dust = rubbish = refuse
 mess = dirt

Exercise 2. a) Read the first part of the text and give the title to it.
 b) Read the second part of the text and give the title to it.

Exercise 3. Find the Russian equivalents for: to deposit, to contaminate, to threaten the health, to clean up, to store, to remove, commercial garbage.

Exercise 4. Find the English equivalents for: промышленные отходы, подземные воды, пропускать (давать течь), просачиваться, создавать, хранить, позволять, очищать.

Exercise 5. Translate into English, paying attention to Subjunctive mood.

1. If the governments could afford the cost of the cleanup, some areas would have to be permanently removed from public or private use because no one knows how to clean them up.
2. We should install and maintain antipollution equipment if it were not so costly.
3. If economic growth and environmental responsibility had gone hand in hand, people would not have faced the problems of environmental pollution.
4. If people did not contaminate air, land and water billion people would not lack clean drinking water.

Exercise 6. Translate these sentences and tell if the statement is right or wrong using the phrases: that's wrong, I don't agree with you or that's right, sure thing, exactly.

1. Massive amounts of wastes are produced by modern technology.
2. Industrial garbage is deposited in open pits.

3. Dump sites are the sources of contamination of the nearest areas.

Exercise 7. Answer the question to the text.

1. What is a pit?
2. What are underground tanks used for?
3. What wastes are very toxic?
4. What do dump sites contaminate?
5. Why do we call the nuclear weapons plants an environmental nightmare?
6. Why do dump sites threaten the health of those living nearby?
7. Does anybody know how to clean areas of radioactive pollution?

Exercise 8. Retell the text.

Exercise 9. Read, translate and act out the following dialogue.

Noise pollution

- Does WHO consider noise pollution a big problem?
- Certainly, nowadays noise is becoming a major pollutant. Of all forms of pollution, the most aggressive is the constant noise in the street, in the factory, and even inside the building.
- What definition do the specialists give to the term of Noise Pollution?
- They say: " Although widespread, noise is a rather subjective phenomenon, producing an auditory sensation considered to be annoying".
- You see, in short, we are chronically subjected to noise, which usually varies between 35 and 60 decibels with occasional peaks of 90 to 100. But whether such a noise is harmful to health, no scientist has yet taken the responsibility of giving a definite or clear answer to it.
- But in what way do the scientists consider its effect harmful?
- Well, a series of investigations in the USA and Europe gave evidence that noise was a significant factor in certain affections. There doesn't appear to be any real syndrome due to noise, though it may be possible to speak of a so-called "sonic" pathology.

Exercise 10. Read and discuss your reaction.

1. Between 1990 and 2000 10% of the estimated 30 million species of plants and animals will be lost forever. By 2030 another 20% are likely to be lost. The extinction of the plant species can cause the loss of 30 dependent organisms.



2. By 1990 half the world's rainforests had already been destroyed. Of the remaining half, one third disappears between 1990 and 2000 and another third by 2030.
3. Between 1990 and 2000 the average temperature rose by 1°C . By 2100 it will rise by 3°C . to 5°C . This will have unpredictable effect on local weather patterns. The sea level is likely to rise between 10cm and 2m.
4. There were 600 million motor vehicles in 1990, 750 million in 2000, and there will be 1,100 by 2300.
5. The total world population in 1990 was 5,300 million. By 2000 it was 6,000 million, and by 2030 there may be 8,000 to 10,000 million mouth to feed and by 2100 11,000 to 14,000

БИБЛИОГРАФИЧЕСКИЙ СПИСОК

1. Верховцова О.М. Making a new start. Методично-навчальний посібник з курсу ділової англійської мови для студентів факультету економіки та менеджменту. – Вінниця, 2001.
2. U. S. News and world Report. August 17/24, 1998.

