МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ТАВРІЙСЬКИЙ ДЕРЖАВНИЙ АГРОТЕХНОЛОГІЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ ДМИТРА МОТОРНОГО

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Кафедра «Іноземні мови»

«ІНОЗЕМНА МОВА ЗА ФАХОВИМ СПРЯМУВАННЯМ» (АНГЛІЙСЬКА)

Навчально-методичний посібник для самостійного
позааудиторного читання
для здобувачів ступеня вищої освіти «Бакалавр»
(на основі повної загальної середньої освіти)
за спеціальністю 101 «Екологія»
денної форми навчання

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Друкується за рішенням науково методичної комісії факультету Агротехнологій та екології Таврійського державного агротехнологічного університету імені Дмитра Моторного від «25» жовтня 2019 р., протокол №3

Автор:

С.П. Шевченко – старший викладач кафедри «Іноземні мови», Таврійський державний агротехнологічний університет імені Дмитра Моторного.

Рецензент:

Т.В. Коноваленко – к. пед. наук, доцент, декан філологічного факультету Мелітопольського державного педагогічного університету ім. Б. Хмельницького

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ПЕРЕДМОВА

Навчально-методичний посібник з розвитку навичок читання та говоріння на ІІ етапі навчання англійської мови.

Мета посібника – формування у студентів навичок здобування, розуміння, опрацювання та репродукування інформації з оригінальних англомовних текстів за фахом.

Посібник складається з трьох розділів, тематика яких відповідає програмі навчального курсу дисципліни.

Кожний розділ містить систему лексико-комунікативних вправ, спрямованих на засвоєння мовних елементів фахового стилю. Вправи містять проблемні питання, комунікативні ситуації, тематичні завдання.

Вправи навчально-методичного посібника націлюють на різні види спілкування: студент ↔ викладач або студент ↔ студент; парну та групову роботу; участь у дискусії.

Обсяг кожного розділу відповідає нормам одного завдання з самостійного позааудиторного читання для студентів немовних вузів.

Додаток посібника містить:

- словник лексичних одиниць та абревіатур;
- фрази та вирази для ведення дискусій, представлення презентацій та анотування текстів;
- відповіді до завдань розділів посібника.

Навчально-методичний посібник призначено для студентів факультетів біологічних спеціальностей вищих навчальних закладів денної, заочної та дистанційної форм навчання.

UNIT 1

POLLUTION

1. Read the texts and be ready to discuss environment pollution and the ways of solving this problem.

Pollution is the introduction of contaminants into the natural environment that causes adverse change. Pollution can take the form of chemical substances or energy, such as noise, heat or light. Pollutants, the components of pollution, can be either foreign substances/energies or naturally occurring contaminants. Pollution is often classed as point source or nonpoint source pollution.

Pollution became a popular issue after World War II, due to radioactive fallout from atomic warfare and testing. Then a non-nuclear event, The Great Smog of 1952 in London, killed at least 4000 people. This prompted some of the first major modern environmental legislation, the Clean Air Act of 1956.

Pollution began to draw major public attention. Severe incidents of pollution helped increase consciousness.

The development of nuclear science introduced radioactive contamination, which can remain lethally radioactive for hundreds of thousands of years. Nuclear weapons continued to be tested in the Cold War, sometimes near inhabited areas, especially in the earlier stages of their development.

International catastrophes such as the wreck of the Amoco Cadiz oil tanker off the coast of Brittany in 1978, the Bhopal disaster in 1984 and the Chernobyl tragedy in April 1986 have demonstrated the universality of such events and the scale on which efforts to address them needed to engage.

Growing evidence of local and global pollution and an increasingly informed public over time have given rise to environmentalism and the environmental movement, which generally seek to limit human impact on the environment.

Some progress has been already made in this direction. As many as 159 countries – members of the UNO – have set up environmental protection agencies. Numerous conferences have been held by these agencies to discuss questions of ecologically poor regions. The international organization Greenpeace is also doing much to preserve the environment.

Forms of pollution

The major forms of pollution are listed below:

- ***Air pollution:*** the release of chemicals and particles into the atmosphere. Common gaseous pollutants include carbon monoxide, sulfur dioxide, chlorofluorocarbons (CFCs) and nitrogen oxides produced by industry and motor vehicles.

- ***Light pollution*** includes light trespass, over-illumination and astronomical interference.
- ***Littering:*** the criminal throwing of inappropriate man-made objects onto public and private properties.
- ***Noise pollution:*** roadway noise, aircraft noise, industrial noise as well as high-intensity sonar.
- ***Soil contamination*** occurs when chemicals are released by spill or underground leakage. Among the most significant soil contaminants are hydrocarbons, heavy metals, herbicides, pesticides and chlorinated hydrocarbons.
- ***Radioactive contamination***, resulting from 20th century activities in atomic physics, such as nuclear power generation and nuclear weapons research, manufacture and deployment.
- ***Thermal pollution*** is temperature change in natural water bodies caused by human influence, such as use of water as coolant in a power plant.
- ***Visual pollution,*** which can refer to the presence of overhead power lines, motorway billboards, scarred landforms (as from strip mining), open storage of trash, municipal solid waste or space debris.
- ***Water pollution***, by the discharge of wastewater from commercial and industrial waste into surface waters; discharges of untreated domestic sewage, and chemical contaminants, such as chlorine, from treated sewage; release of waste and contaminants into surface runoff flowing to surface waters (including urban runoff and agricultural runoff, which may contain chemical fertilizers and pesticides); waste disposal and leaching into groundwater; littering.

Sources and causes

Air pollution produced by ships may alter clouds, affecting global temperatures.

Air pollution comes from both natural and human-made sources. However, globally human-made pollutants from combustion, construction, mining, agriculture and warfare are increasingly significant in the air pollution equation.

Motor vehicle emissions are one of the leading causes of air pollution. China, United States, Russia, Mexico and Japan are the world leaders in air pollution emissions. Principal stationary pollution sources include chemical plants, coal-fired power plants, oil refineries, petrochemical plants, nuclear waste disposal activity, incinerators, large livestock farms (dairy cows, pigs, poultry, etc.), PVC factories, metals production factories, plastics factories, and other heavy industry. Agricultural air pollution comes from contemporary practices which include clear felling and burning of natural vegetation as well as spraying of pesticides and herbicides.

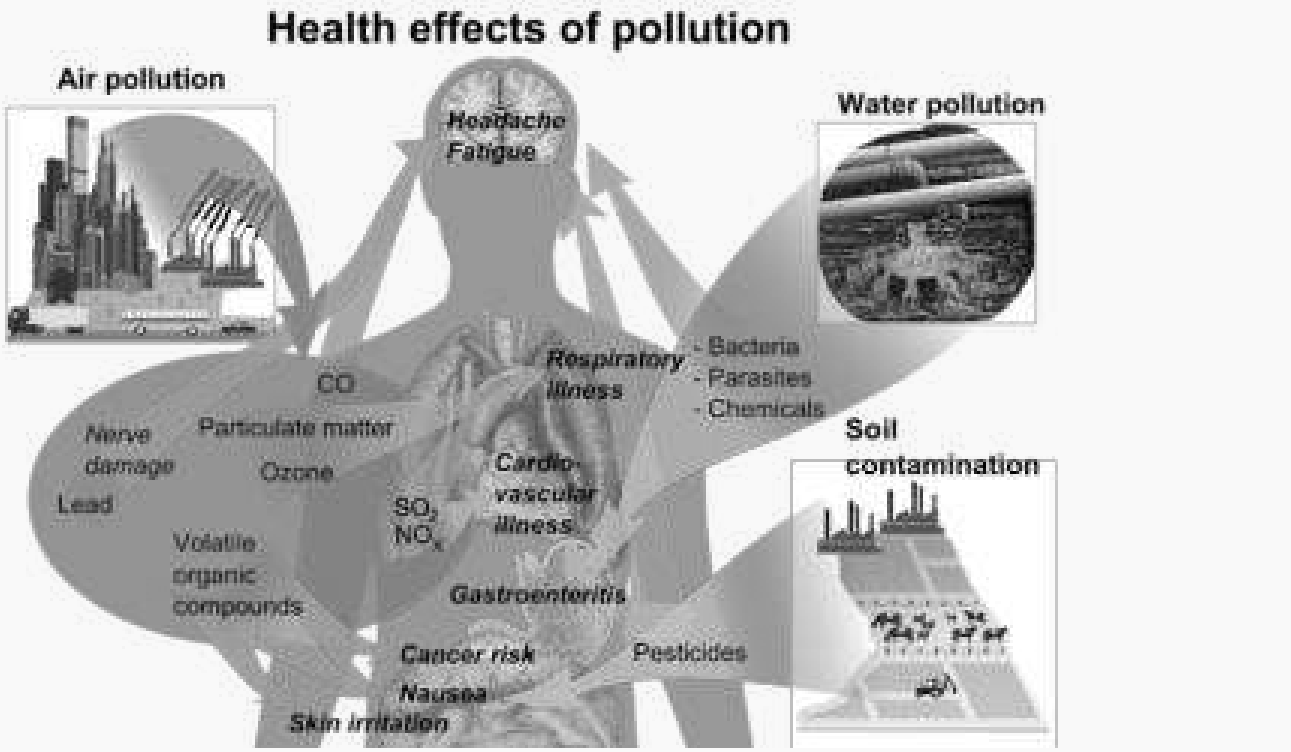
Some of the more common *soil contaminants* are chlorinated hydrocarbons (CFH), heavy metals (such as chromium, cadmium–found in

rechargeable batteries, and lead–found in lead paint, aviation fuel and still in some countries, gasoline), zinc.

Pollution can also be the consequence of a natural disaster. For example, hurricanes often involve *water contamination* from sewage, and petrochemical spills from ruptured boats or automobiles. Larger scale and environmental damage is not uncommon when coastal oil rigs or refineries are involved. Some sources of pollution, such as nuclear power plants or oil tankers, can produce widespread and potentially hazardous releases when accidents occur.

In the case of *noise pollution* the dominant source class is the motor vehicle, producing about ninety percent of all unwanted noise worldwide.

Human health



Overview of main health effects on humans from some common types of pollution.

Adverse air quality can kill many organisms including humans. *Ozone pollution* can cause respiratory disease, cardiovascular disease, throat inflammation, chest pain, and congestion. *Water pollution* causes approximately 14,000 deaths per day, mostly due to contamination of drinking water by untreated sewage in developing countries. An estimated 700 million Indians have no access to a proper toilet, and 1,000 Indian children die of diarrheal sickness every day. Nearly 500 million Chinese lack access to safe drinking water. 656,000 people die prematurely each year in China because of *air pollution*. In India, air pollution is believed to cause 527,700 fatalities a year.

Oil spills can cause skin irritations and rashes. *Noise pollution* induces hearing loss, high blood pressure, stress, and sleep disturbance. Mercury has been linked to developmental deficits in children and neurologic symptoms. Older people are majorly exposed to diseases induced by air pollution. Those with heart or lung

disorders are under additional risk. Children and infants are also at serious risk. Lead and other heavy metals have been shown to cause neurological problems. Chemical and radioactive substances can cause cancer and as well as birth defects.

Environment

Pollution has been found to be present widely in the environment:

- Carbon dioxide emissions cause ocean acidification, the ongoing decrease in the pH of the Earth's oceans as CO_2 becomes dissolved.
- The emission of greenhouse gases leads to global warming which affects ecosystems in many ways.
- Invasive species cannot compete native species and reduce biodiversity. Invasive plants can contribute debris and biomolecules that can alter soil and chemical compositions of an environment, often reducing native species competitiveness.
- Nitrogen oxides are removed from the air by rain and fertilize land which can change the species composition of ecosystems.
- Smog and haze can reduce the amount of sunlight received by plants to carry out photosynthesis and leads to the production of troposphere ozone which damages plants.
- Soil can become infertile and unsuitable for plants. This will affect other organisms in the food web.
- Sulphur dioxide and nitrogen oxides can cause acid rain which lowers the pH value of soil.

For humankind, the factor of technology is a distinguishing and critical consideration, both as an enabler and an additional source of byproducts. Short of survival, human concerns include the range from quality of life to health hazards. Since science holds experimental demonstration to be definitive, modern treatment of toxicity or environmental harm involves defining a level at which an effect is observable. Common examples of fields where practical measurement is crucial include automobile emissions control, industrial exposure, toxicology, and medicine.

2. Answer the questions.

1. What is pollution?
2. What is pollutant?
3. Are there any forms of pollution in your town/city/village?
4. What are the main sources and causes of air pollution?
5. What are the main sources and causes of water pollution?
6. Does pollution influence environment?
7. Can people stop environment pollution? What must we do?

3. Match different forms of pollution to their descriptions.

1. Water pollution	a) the release of chemicals and particles into the atmosphere
2. Air pollution	b) the release of chemicals and particles into the soil
3. Soil pollution	c) the discharge of wastewater from commercial and industrial waste into surface waters
4. Noise pollution	d) the criminal throwing of waste in public and private places
5. Littering	e) noise of different kinds of vehicles

4. Match each word on the left with a word on the right to make a phrase.

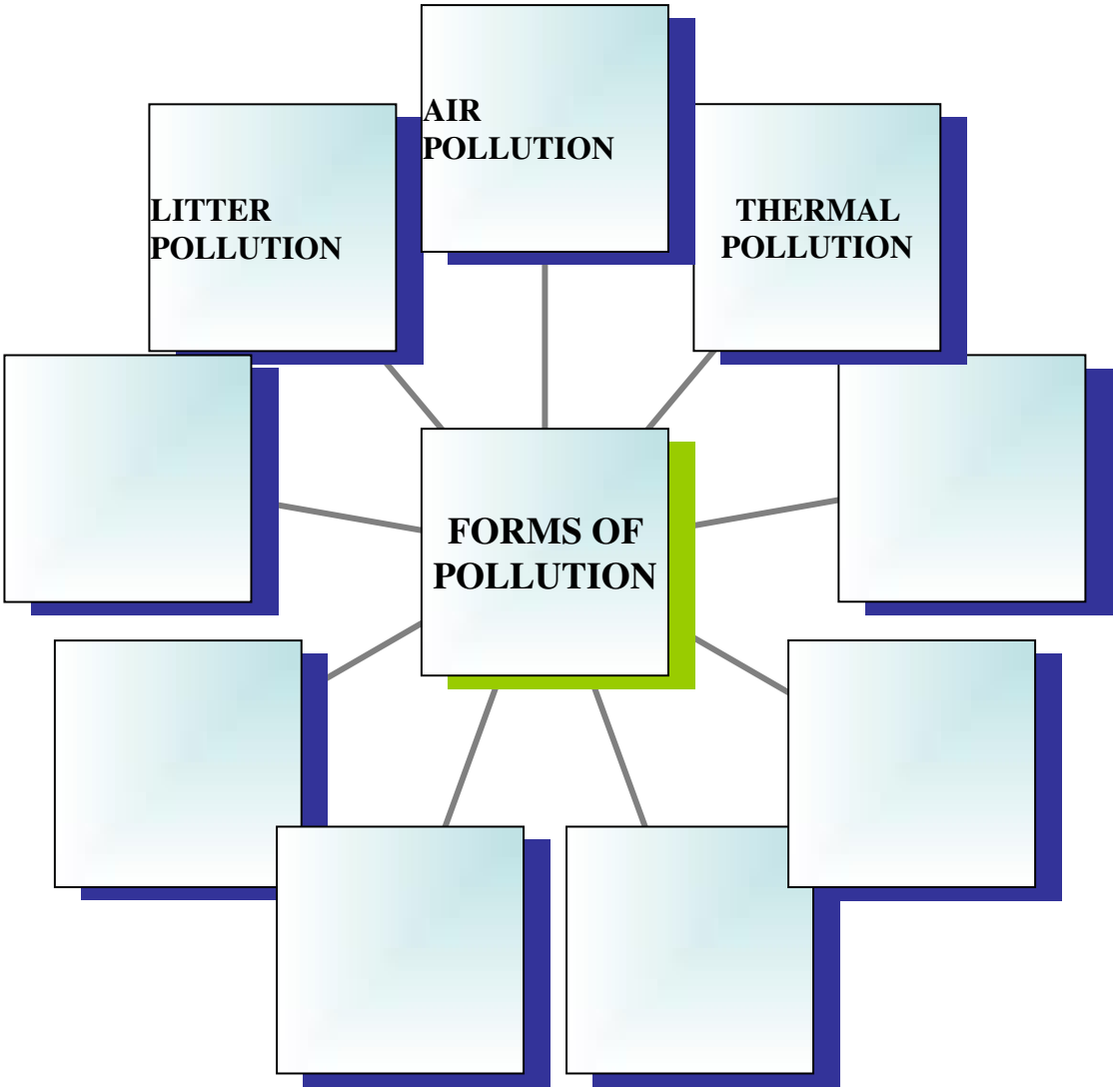
1. natural	a) health
2. chemical	b) dioxide
3. human	c) warming
4. sulphur	d) disaster
5. radioactive	e) fertilizer
6. nuclear	f) contamination
7. global	g) weapons

5. Complete the sentences with the words from the box.

Pollution control, pollutants, the vehicles, air pollution, radioactive substances, carbon dioxide, nuclear science

1. The components of pollution are **…** .
2. **…** affects global warming greatly.
3. Chemical and **…** can cause cancer.
4. **…** emissions cause ocean acidification.
5. The development of **…** introduced radioactive contamination.
6. **…** are the sources of noise pollution.
7. **…** is the control of emissions into air, water or soil.

6. What are the main forms of pollution? Complete the diagram below, then compare and discuss your diagram with other students.



7. Discuss the following problems.

- Environmental pollution in Ukraine.
- Environmental pollution. We must stop it!
- Pollution and human health.

Use the following words, phrases and terms in discussion:

pollution
a contaminant
to throw
a pollutant
water pollution
soil pollution
air pollution
noise pollution
to pollute
light pollution
radioactive contamination
greenhouse effect
to impact
ozone holes
rubbish pollution
global warming
destruction of wildlife
to alter
to carry out
to contaminate

Pollutants

A pollutant is a waste material that pollutes air, water or soil. Three factors determine the severity of a pollutant: its chemical nature, the concentration and the persistence.

Pollution control

Pollution control is a term used in environmental management. It means the control of emissions and effluents into air, water or soil. Without pollution control, the waste products from consumption, heating, agriculture, mining, manufacturing, transportation and other human activities, whether they accumulate or disperse, will degrade the environment.

8. Summarize the texts of the unit.

9. Comment on the following quotations.

- The greatness of nation can be judged by the way its animals are treated.

Mohandas Gandhi

- Treat the Earth well. It wasn't given to you by your parents; it was loaned to you by your children.

Lee Talbot

- If a tree dies, plant another in its place.

Carolus Linnaeus

UNIT 2

GLOBAL WARMING

1. Read the texts and be ready to discuss the causes of global warming and the ways of solving this problem.

Our planet's atmosphere is warming up rapidly. Researchers are certain that emissions from human activities have caused this unnatural change. Using the latest computer models, their forecasts are worry about of what might global warming mean to our planet. Fortunately, everyone can be a part of the solution in slowing down global warming. It requires strong commitment from big corporations down to everyday people. This combined effort can make a significant difference.

You can make many changes in your daily life some that seem small, some less so — that cut back on the carbon emissions for which you're responsible. You're probably already familiar with many of the little steps you can take to be more climate friendly:

For making your home more energy efficient: insulate your roof, basement, and walls; seal your windows; replace your old light bulbs with compact fluorescent bulbs.

For reducing the amount of garbage you produce: take a reusable bag with you when you have shopping, buy unpackaged goods, recycle and reuse materials.

For using energy wisely: turn off lights and appliances when you're not using them, use the air conditioner less in summer, and turn down the heat in winter.

Causes of Global Warming

There is no question that everyone is feeling the effects of global warming. The government agencies are scrambling to find means to stop it from escalating into an uncontrollable situation that may see the total destruction of the planet. And so far, all possible solutions lead scientists and environmental experts to ask one important question – what is causing global warming?

Finding out the source of the problem is the most effective way of solving it. In the case of global warming, it might be too late to stop it from happening or even reverse it but knowing what to avoid doing is essential nonetheless to efforts being done to save human lives. The last thing anyone would like to do is to aggravate the situation. This is why learning and studying facts that directly impacts the behavior of the environment are key elements in establishing these global warming causes.

Carbon dioxide emissions from fossil fuels

Coal powered plants emit 93% of the carbon dioxide generated from production of electricity in the US alone. And over 40% of the total carbon emission comes from power production which is vital to a highly industrialized country such as America.

With technology becoming more efficient, more power hungry devices are expected to come out of factories in the near future which mean in order to avoid totally destroying the earth's atmosphere, more environmentally friendly power source need to be found quickly. Failure would mean we can just stop right here in naming the lead to what is causing global warming.

Vehicles CO_2 Emissions

The demand for vehicles increases each year and with it the consumption of gasoline which emits CO_2 as byproduct. What makes this worse is that old car models are sold to third world countries which they continue to use despite having faulty engines that increase carbon emissions. Automobile manufacturers are coming out with more efficient engines that reduce the release of harmful carbon dioxide to the atmosphere but until better alternative for fuel is found, the proliferation of vehicles worldwide will always be on top of the list of causes of global warming.

Animals Methane gas

As the world's population increase so does the demand for food like livestock and farm animals increases too. Unfortunately, what is vital for human survival is also harmful to the environment and this causes a big dilemma for producers and consumers. Some environmentalist groups suggest lessening the consumption of meat products and help people to become the vegetarians which is not really easy to do.

Deforestation

Wood is also an essential commodity but it is also a renewable resource which should have been practiced from the very beginning. The problem is that the huge demand for timber products by far outweighs the causes of global warming in the logger's mind. The result is massive deforestation in various parts of the planet. However, efforts to plant trees are underway across the globe which hopefully can help mitigate the effects of global warming.

Ways of solving the problem

Global warming is a pressing problem that if not solved soon could leave everyone on this planet in the direst of circumstances. However, you don't have to be a scientist with a miracle solution or a rich philanthropist with countless resources to help. You need few simple lifestyle changes, sense of responsibility, and positive caring attitude.

Here are some small easy things you can do to contribute to the effort against global warming.

1. Use compact fluorescent light bulbs/tubes instead of the regular incandescent ones. Although CLFs (Compact Fluorescent Lamps) are more expensive than incandescent, they give off the same amount of light, have a longer rated life and use less power.

2. Put in a programmable thermostat in your home. These devices can be programmed to adjust the temperature according to different parts of the day thus reducing the heating and cooling losses of a building and thereby saving precious energy.

3. Wash or change dirty filters on your air conditioner and furnace. Doing this regularly saves a large amount of carbon dioxide every year.

4. Choose your purchases wisely. Make sure that the appliances you buy are energy efficient.

5. Turn off appliances instead of setting them on standby. Appliances on standby mode still consume a lot of energy.

6. Do not place your freezers and refrigerators in hot places or next to hot appliances. Doing this causes them to use more energy and emit more CO_2 than if they were standing on their own.

7. If your refrigerator and freezers are old, care that they are defrosted regularly. Better, if you can afford to buy more energy-efficient newer models.

8. Do not air your house for more than a few minutes. Make sure that windows and doors are closed during cold months so that heat does not escape as the energy to keep your home warm produces a lot of emissions.

9. Audit your home to see what areas are energy inefficient in it. Care your walls and ceilings are properly insulated and weatherized accordingly. Audits come free with some utilities and it'll save you money as well as reduce CO_2 emissions.

10. Use the washing machine and the dishwasher only when you have a load that can fill them. If you really need to use them right away, use the economy setting and do not set the temperature too high.

11. Instead of bathing, take showers. Use low flow shower heads in place of power showers. They do the same thing and are less expensive.

12. Do not use so much hot water as heating water consumes a lot of energy. Using cold or warm water for washing clothes saves 500 pounds of carbon dioxide a year.

13. Hang your clothes out to dry instead of using a dryer. Using a clothesline for even just six months a year can save at least 700 pounds of carbon dioxide annually.

14. Make use of a reusable shopping bag. Disposable shopping bags contributes to pollution and releases CO_2 and methane into the atmosphere.

15. Plant more trees. Houses shaded by trees are cooler and can thereby make less use of their air conditioning units. Trees, of course, also absorb and help lessen the amount of carbon dioxide in the atmosphere.

16. Use wind, solar and other alternative sources of energy. You can even earn money by selling the energy you don't use.

17. Purchase locally-produced and fresh food. Fresh food take ten time less energy to produce than frozen ones while buying from the local farmer's market enables you to save fuel and contribute to your country.

18. Instead of driving to work everyday, try walking, biking, carpooling or commuting. Less driving means less carbon dioxide emissions from your car.

19. Reduce the number of flights you take every year. Airplanes and jets give off a lot of emissions so reducing flying trips helps a lot.

20. Be active in struggle against global warming. Be an example to your friends and relatives and encourage them to take action. Support or join environmental groups. You can even help by voting for environmentally-aware politicians and laws that promote conservation.

By following even just a few of these suggestions you can be certain that you're already doing the planet a lot of good. Remember, every little thing you do help.

Global Warming refers to the gradual increase in the Earth's temperature as a result of the growing concentration of human induced green house gases (CO_2 - carbon dioxide, CFCs - Chlorofluorocarbons, HFCs - Hydrofluorocarbon) in our atmosphere.

Human activities — primarily, the burning of fossil fuels, coal and car emissions, have resulted in growing concentrations of carbon dioxide and other greenhouse gases in the atmosphere. These increasing quantities of greenhouse gases are retaining more and more of the sun's heat. The heat trapped by the carbon dioxide blanket is raising temperatures all over the world — hence, global warming.

So far, Earth has seen a 1.4-degree Fahrenheit (0.8-degree Celsius) increases in global average temperature because of increased greenhouse gases in the atmosphere. Unfortunately, the amount of greenhouse gases that human activities produce grows

daily. So, humanity's current behavior is driving temperatures up at an alarming rate. Temperatures in Polar Regions, such as the Arctic, are experiencing temperature rises that are twice the global average.

2. Answer the questions.

1. What is global warming?
2. Is global warming dangerous for flora and fauna of our planet?
3. What are the ways of being more climate friendly at home?
4. Is it important to know about the causes of global warming? Why?
5. What kinds of vehicles are dangerous for the atmosphere?
6. Is there the problem of deforestation in your climatic region?
7. How can we stop global warming?
8. What can you do to protect our planet from global warming?
9. What can you change in your lifestyle in order to save our planet?

3. How well do you know your neighbour? Use words from the box to complete the table for you and your partner. Then work together to check your answers.

always • normally • frequently • often • sometimes • seldom • never

How often do you … ?	**You**	**Your neighbour**
☺make your home more energy efficient		
☺reduce the amount of garbage you produce		
☺use compact fluorescent light bulbs		
☺use a reusable shopping bag		
☺use energy wisely		
☺plant trees		
☺take showers instead of bathing		
☺struggle against global warming		

4. Match each word on the left with a word on the right to make a phrase.

1. carbon	a) fuel
2. earth's	b) dioxide
3. fossil	c) warming
4. massive	d) atmosphere
5. using	e) effect
6. greenhouse	f) deforestation

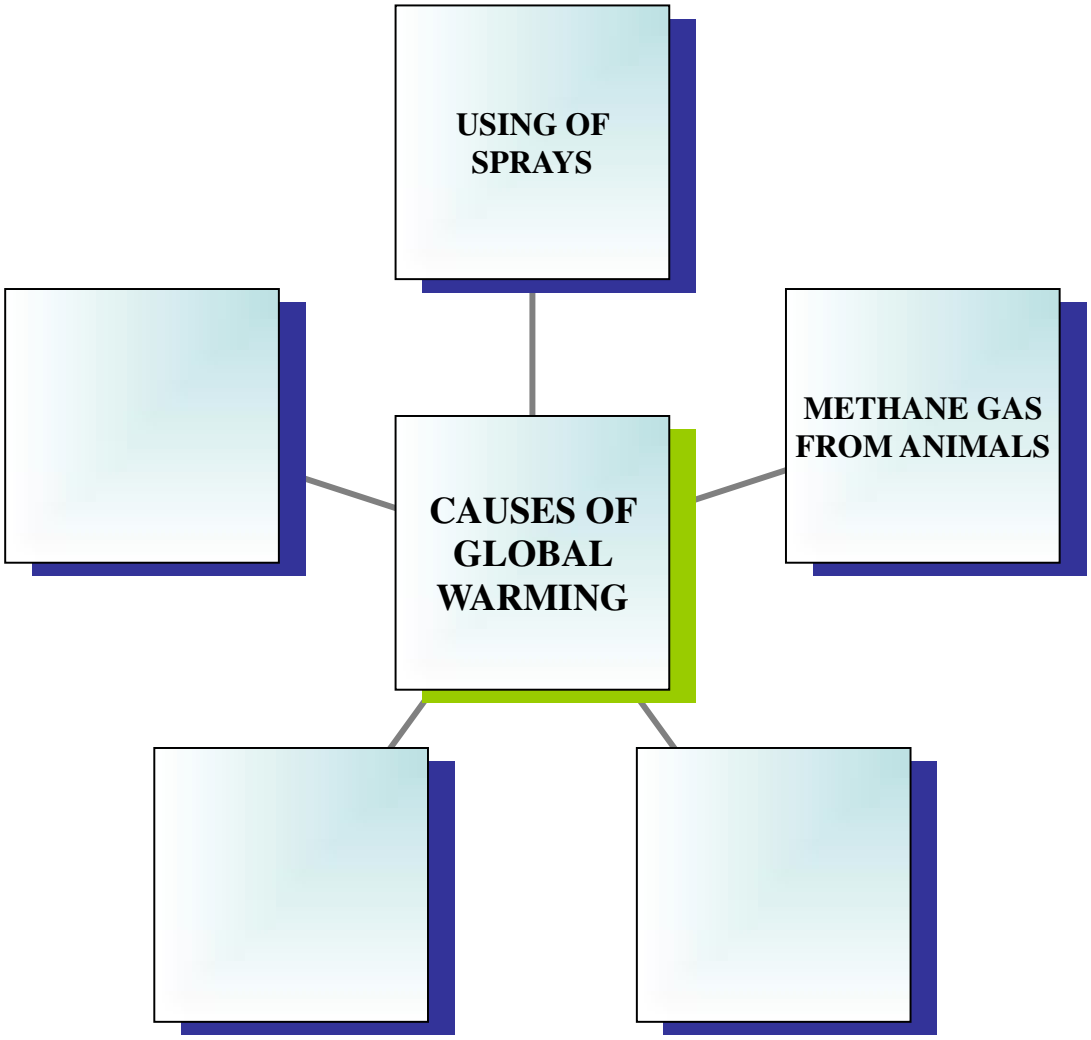
7. global g) sprays

5. Complete the sentences with one of the words from the box.

Carbon emissions, deforestation, global warming, carbon dioxide emissions, sprays, planet's atmosphere, human activities

1. **…** is the gradual increase of the Earth's temperature.
2. **…** have resulted in growing concentrations of carbon dioxide and other greenhouse gases in the atmosphere.
3. **…** is one of the main reasons of global warming.
4. **…** is warming up rapidly.
5. You can make many changes in your daily life that cut back on the **…**
6. Using **…** is very dangerous for the ozone layer.
7. Using the alternative sources of energy will help to reduce **…**

6. What are the main causes of global warming? Complete the diagram below, then compare and discuss your diagram with other students.



7. Discuss the following problems.

- Global warming threatens our planet.
- Stop global warming! Save your children!
- Global warming. Don't die of ignorance!

Use the following words and phrases in discussion:

emissions
harmful human activities
solution
to be more climate friendly

to reduce greenhouse gases
warming up
take measures
survive
destroy forests
increasing of global average temperature
concentration of carbon dioxide in the atmosphere
sense of responsibility
destroying the earth's atmosphere

8. Summarize the texts of the unit.

9. Comment on the following quotations and proverb.

- Mother planet is showing us the red warning light – "be careful" – she is saying. To take care of the planet is to take care of our own house.

The Dalai Lama

- The frog does not drink up the pond in which it lives.

Indian proverb

- The deer, the horse, the great eagle, these are our brothers, the earth is our mother; all things are connected like the blood which unites one family.

Chief Seattle

UNIT 3

RECYCLING I

1. Read the texts and be ready to discuss waste recycling, its importance and benefits.

Recycling is the process of making or manufacturing new products from a product that has originally served its purpose. If these used products are disposed of in an appropriate, environmentally friendly way, the process of recycling has been set in motion.

Items that are made from materials such as aluminum, plastic water bottles, and certain kinds of paper can be separated from your regular trash and put in an appropriate recycling bin.

Recycling paper

Recycled paper is paper that was made from paper and paper products that has already been used and recovered. The waste paper undergoes a process in which it is made into new paper products. Paper that can be called legally recycled paper has to include materials that have been recovered after the initial manufacturing process.

Why should we recycle paper?

The manufacturing of paper on an industrialized scale has enormous effects on the environment. The procurement and processing of raw materials have a variety of negative effects on the environment. Denudation of woodlands and exhaustion of water supplies are some of these effects.

Manufacturing also has its own share of negative effects. These are often waste disposal issues. When paper and other suitable materials are recycled all these environmental impacts are reduced significantly.

A major part of municipal waste is made up of paper and paper products before the recovery of recyclable materials. Studies show up to 35 percent of the weight of solid waste is made up of paper. This means that any landfill in use can be used longer if

waste paper is recovered. This saving in landfill volume is especially relevant today since landfill area is at a premium.

Statistics and facts reported by the United States Environmental Protection Agency have shown that there is a reduction in air and water pollution when paper products are recycled over the manufacturing of new paper. Water pollution is lessened by 35 percent and air pollution is lessened by 74 percent.

Recycling plastic bottles

Plastic bottles can be found almost anywhere on Earth. This attests to the fact of their usefulness and to the ease and low cost in making these items. Indeed plastic bottles are so useful that almost any liquid beverage or food product can be found being sold in plastic bottles.

Bottled water is generally accepted to be a better alternative to drinking plain tap water and especially better than soft drinks and sports drinks.

But bottled water is not considered to be healthy for the environment. The part about recycled water that is bad for the environment is the plastic bottle part.

Recycled plastic bottles are an indispensable and ubiquitous part of our lives. They are light in weight and almost unbreakable when used for their designed purpose. This is also the reason why plastics and plastic bottles account for a large part of the waste generated by our throwaway society. Plastic bottles are the most recycled plastic items but still the recycle rate is only about 24 percent.

What are the benefits to recycling plastic bottles?

Conservation of oil. When a ton of plastic bottles are recycled approximately 3.8 barrels of petroleum is saved.

Reduction of greenhouse gas emissions. The substitution of recycled materials reduces the emission of greenhouse gases that are produced in the manufacturing of virgin materials.

Saving of landfill space. Not having millions of plastic bottles in the landfill results in a saving of 6.7 cubic meters of landfill space that is at a premium right now. Plastic bottles also take an average of 500 years to biodegrade.

Conservation of energy. Water and soft drink bottles are made of polyethylene terephthalate or PET. Recycling of one pound of PET results in a saving of approximately 12,000 BTU's (British Thermal Units).

Benefits of reuse. Recycled bottles can provide an environmentally friendly source of materials for the manufacture of new products and substitutes recycle materials for virgin materials.

The recycling symbol

This symbol and variations of recycling is used to designate recyclable materials. It is composed of **three chasing arrows** that form **a continuous loop**. This symbol is not a trademark. It is in the public domain and can therefore be used by anybody.

Sometimes though, local law may limit the use of this symbol in product, labeling when it's used to mislead consumers as to the nature of these products.

The universal recycling symbol is **known internationally**. The three chasing arrows of the recycling symbol signify the **three aspects or steps in the** recycling process.

Collection and **sorting** is just the first step. The second step is the **reprocessing** of these materials into **something that is usable**. The third step is of course the action that closes the loop. This is when **consumers buy recycled items**. Without this crucial third step the cycle is incomplete.

The concept and origin of the three arrows of recycling can be traced back to **April 1970** when the **first Earth Day** was observed and a contest was held. The contest was sponsored by the ***Container Corporation of America (CCA).*** It was announced to environmentally aware art students and they were asked to create a design symbolizing the paper recycling process.

The winning entry was to be used to **identify products and packages made from recycled and recyclable fibers**. This campaign was also designed to make the public aware that recycling paper was effective and additionally would conserve natural resources tremendously.

CCA was promoting the idea to the public that paper was prime material for recycling and that recycling was an excellent way to promote environmental health.

Over 500 talented artists and art students submitted their entries to be decided on by a distinguished panel of judges at the International Design Conference at Aspen, Colorado. The theme of the conference was "**Environment by Design**".

Gary Dean Anderson, a graduate student at the University of Southern California in Los Angeles took the first prize. Anderson drew the symbol completely by hand using pen and ink. At the time computer graphics was a largely experimental field and no one had personal computers then.

Since that time that Gary Dean Anderson won first prize, many variations of the recycling symbol have been designed and used to inspire people across the world to get educated about why recycling is important.

Why is recycling important?

Recycling helps extend the life and usefulness of something that has already served its initial purpose by producing something that is useable. Recycling has a lot of benefits and importance not only to us humans but especially to our planet.

Recycling has a lot of benefits that can help people and save the environment as well. Its importance can be observed in many different ways. Here are some great reasons why recycling is important:

Recycling saves the earth

Recycling different products will help the environment. For example, we know that paper comes from trees and many trees are being cut down just to produce paper. By recycling it, we can help lessen the number of trees that are cut down. Products made from raw materials that came from our natural resources should be recycled so that we can help preserve the environment.

Recycling saves energy

It takes less energy to process recycled materials than to process virgin materials. For example, it takes a lot less energy to recycle paper than to create new paper from

trees. The energy from transporting virgin materials from the source is also saved. Saving energy also has its own benefits like decreasing pollution. This creates less stress on own health and our economy.

Recycling helps reduce global warming and pollution

By saving energy in industrial production through recycling, the greenhouse gas emissions from factories and industrial plants are lessened and the use of fuels that emit harmful gasses during production is also minimized. Recycling non-biodegradable waste (rather then burning it) will contribute a lot to help reduce air pollution and greenhouse gasses that depletes the ozone layer.

Recycling reduces waste products in landfills

Landfills are mostly composed of non-biodegradable waste which takes long time to decompose. By recycling, we can lessen the waste materials that are placed into landfills and we are able to make the most out of these materials. If we don't recycle, more and more garbage will go to landfills until they all get filled up. If that happens, where will the rubbish be placed? How would you like a landfill in your backyard?

Recycling helps you save money

Recycling provides ways to save money. You can sell recyclable materials to organizations that are willing to buy it. Using products that are recycled lessens expenses. Products that are made from recycled materials are less expensive than products made from fresh materials.

At home, you can recycle biodegradable waste like eggshells, vegetable and fruit peelings and use them to fertilize plants. By doing a little research and getting creative you can save money and trips to the market while being kind to the planet.

As the population of the world increases recycling is becoming increasingly more important. Our technologically advanced societies are creating more and products and packaging that look good and are indestructible, but can take centuries to break down.

In order to combat the rise of factors that are produced by non-environmentally conscious groups, it is up to the growing numbers of individuals and companies that want to inhabit a healthier planet to make a difference.

2. Answer the questions.

1. What is recycling?

2. What kind of recycling materials do you know?
3. Is it important to recycle paper?
4. Recycling plastic bottles is unnecessary, isn't it?
5. Is there any benefit recycling plastic bottles?
6. What does the recycling symbol mean?
7. What do the three chasing arrows of the recycling symbol signify?
8. Who was the author of the recycling symbol?
9. Is recycling important?

3. Match each word on the left with a word on the right to make a phrase.

1. reusable	a) symbol
2. the process	b) bags
3. recycling	c) area
4. landfill	d) materials
5. waste	e) fibers
6. recyclable	f) of recycling
7. recycling	g) paper

4. Complete the sentences with one of the words from the box.

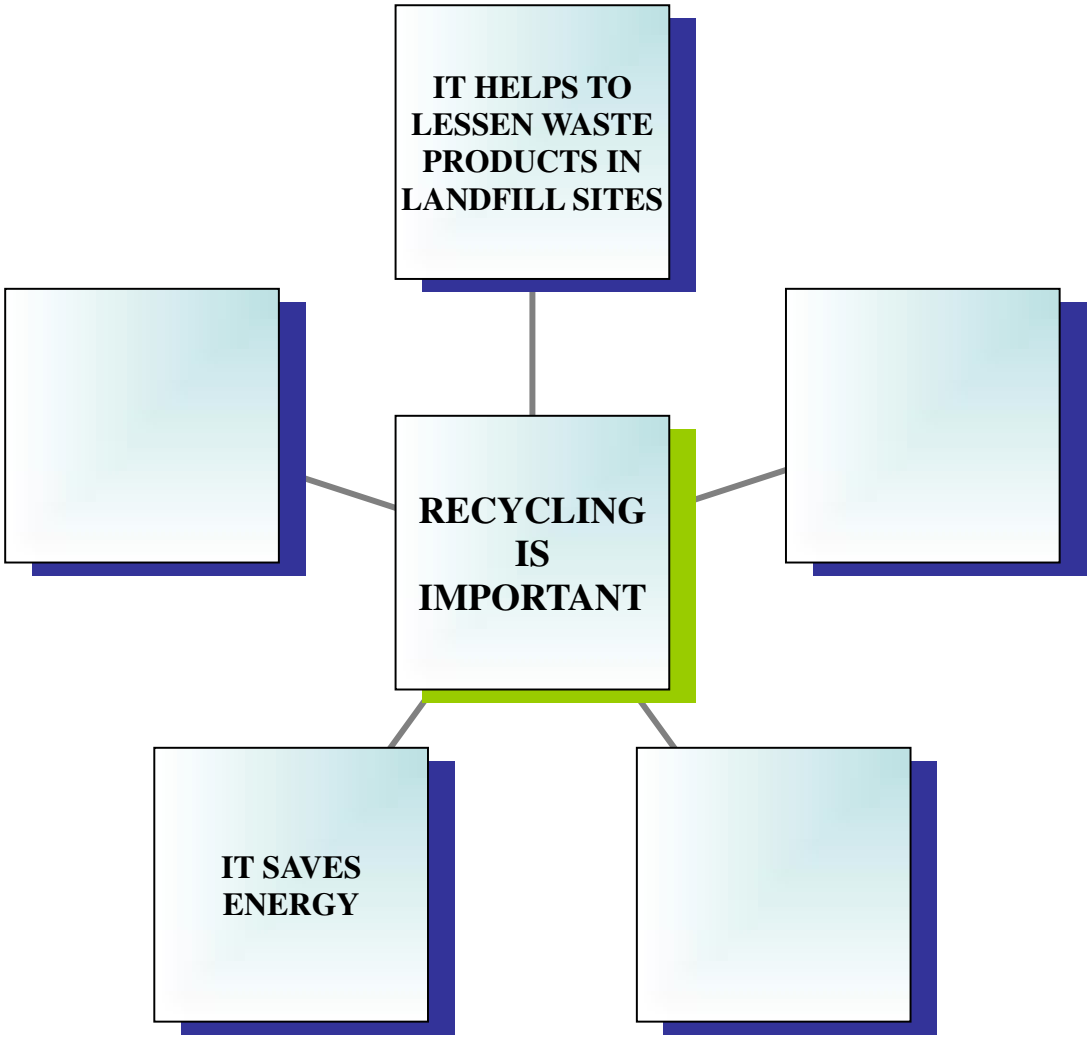
The recycling symbol, recycling, recycling paper, Earth Day, recycling, plastic bottles

1. … is composed of three chasing arrows.
2. … can be found almost anywhere on Earth.
3. … has a lot of benefits and importance to us and to our planet.
4. … is the process of separating, collecting and remanufacturing or converting used or waste products into new materials.
5. … we can help lessen the number of trees that are cut down.
6. The first … was in April 1970.

5. Work with a partner. Write a description of one of the items below, using information of the texts, and a dictionary to help you. Then read your description to another pair. Can they add anything to your description?

☺Recycling
☺The recycling symbol
☺ Recycling paper
☺ Recycling plastic bottles

6. Nowadays recycling is very important. Complete the diagram below, then compare and discuss your diagram with other students.



7. Discuss the following problems.

- Think globally, act locally.
- A world with no rubbish.
- A world full of rubbish.

Words and phrases to be used:

to throw away
landfill site
recycle
plastic bags (bottles)
toxic waste
a cleaner, more pleasant world
saving electricity (water, trees, environment)
packaging
to sort rubbish
burning rubbish
a bin
recycling paper (plastic bottles, aluminium cans)
recycling in educational establishments

8. Summarize the texts of the unit.

9. Comment on the following quotations.

- Don't make rubbish. The Earth is our home.
- The most alarming of all man's assaults upon the environment is the contamination of air, rivers and sea with dangerous and even lethal chemicals.

Rachel Carson

- Earth and water, if not too blatantly abused, can produce again and again for the benefit of all.

Stewart l. Udall

UNIT 4

RECYCLING II

1. Read the texts and be ready to discuss some points about importance of recycling today.

Some facts about recycling

- The average family throws away 6 trees worth of paper.
- It takes the same amount of energy to make one new can as it does to make 20 recycled cans.
- The most common types of waste: paper and cardboard (34%), organic material (25%), textiles (16%), plastic (12%), metals (8%), glass (5%).
- Every ton of paper recycled saves: 7 trees, 124 kilograms of sulfur, 350 pounds of limestone, 9 000 pounds of steam, 228 000 liters of water, 3,3 cubic meters of landfill space.
- If all of our newspapers were recycled. We could save about 250 million trees each year.
- How long does it take to decompose?

Aluminum can – 80 years
Glass bottle – 500 years
Plastic bottle – 700 years
Styrofoam – NEVER

- Used plastic dumped into the sea kills and destroys sea life at estimated 1.000.000 sea creatures per year!

The state of our environment today is such that it needs all the help that we can give it. Global warming is increasing to the detriment of the polar ice caps which are one of the major regulators of our global climate.
Carbon Dioxide, one of the major greenhouse gases is building up in the atmosphere and one of the causes of these is denudation of forests all over the world.
The generation of trash is also at an all-time high. The bottom line is that our environment is in dire straits and all of us need to do our part for the environment.
This is where recycling process comes in. This sounds relatively simple but can contribute enormously to preserving the environment for the future and for our future generations.

What are the stages of the recycling process?

The recycling process is a cycle and is composed of three stages. The first stage is the **collecting and sorting**. In this stage, waste materials are collected and then processed and sorted according to its type and use. After these materials are sorted, they are ready for the second stage – **manufacturing**.
Manufacturing stage is the phase where the collected and sorted materials are processed into new reusable products. Finally, after new products are manufactured,

the next stage follows which is the **selling of the recycled products to consumers**. When the product that the consumers bought already served its purpose, the recycling process will then again continue as these products are collected.

What can every person do for recycling?

Recycling and education process

The role of schools has broadened over the years as awareness of the importance of recycling has deepened. Many programs have been established to teach children to be responsible for their carbon footprint.

When teachers instill in children that their actions will either damage or help the environment, a higher level of consciousness is able to spread throughout the younger generation. We know that children are our future, and when it comes to the health of the Earth, that could not be truer.

Teachers of western countries are doing much more than lecturing. Students are given assignments to contact their local congressmen and women and ask for a help. If there are not recycling bins for all the different materials (water, glass, Styrofoam, paper, metals, etc.), the kids are instructed to write letters stating their concerns and their desire to help.

We should educate our children early so that they will grow up to be responsible for the planet they inhabit. Once these seeds are planted, and then nurtured through awareness and education, the kids become active on their own. Revolutions were born this way. And this world is ready for a recycling revolution.

Recycling and your workplace

The workplace allows for many opportunities to be responsible when it comes to helping the environment. And just as the awareness in schools is being raised, it is with businesses all over the world.

On a smaller scale many businesses are providing clearly marked bins for employees to throw their recyclable trash away.

Energy efficient light bulbs are being used in offices and leaders within businesses offer educational materials on recycling and ways to live sustainably to their employees and in their community.

One such business is Cartridge World in Washington. A representative of Cartridge World made this statement, "*In this time of chaos, we all need to save as much money as we can and help to keep our cities clean and green*".

Encourage employees to recycle paper and other items in the work place as well. If we all work together we can keep our neighborhoods, towns and cities places we can be proud to call home.

The Government Steps Ups

More and more money is being allocated to produce automobiles that do not rely on petrol for instance, so energy efficient cars.

Many countries like Italy and Australia also offer tax advantages and subsidies to schools and companies that have recycling programs and that use alternative forms of

energy to run and grow their business. Legislation is even in motion to promote green and sustainable living in developing countries.

More facts about recycling

Water

- A running tap wastes 2.5 gallons of water each minute.
- A dishwasher uses 41.8 liters of water per use.
- 75 percent of all water used in the household is used in the bathroom.
- A toilet made in 1992 or earlier uses up to 60 percent more water per flush than newer high efficiency toilets.
- Turning of the tap while brushing your teeth in the morning and before bedtimes can save up to 30.4 liters per day. This is a saving of 912 liters per month.
- Running your tap for 5 minutes uses up enough energy to run a 60 watt light bulb for 14 hours.
- A full bath tub uses 266 liters of water. A 5 minute shower only uses 38-95 liters.

Paper

- Recycling 1 ton of paper saves 17 mature trees, 26,600 liters of water, 3 cubic meters of landfill space, 318 liters of oil, and 4000 kilowatt hours of electricity.
- The process of recycling paper instead of making it from new materials generates 74 percent less air pollution and uses 50 percent less water.
- Manufacturing recycled paper uses 60 percent of the energy needed to make paper from new materials.
- Over 73 percent of all newspapers are recovered for recycling. About 33 percent of this is used to make newsprint the rest is used to make paperboard, tissue, or insulation.
- A little more than 48 percent of all office paper is recycled. This is used to make writing papers, paperboard, tissue, and insulation.

Metal

- Recycling steel and tin cans saves 74 percent of the energy used to make them.
- A steel mill using recycled scrap reduces water pollution, air pollution, and mining waste by about 70 percent.
- When you throw away an aluminum can you waste as much energy as if you would filled the can half full of petrol and poured it into the ground.
- Americans, for example, use 100 million tin and steel cans each day.
- Recycling one aluminum can saves enough energy to run a 100 watt light bulb for 20 hours, a computer for 3 hours, and a TV for 2 hours.

Plastic

- Approximately 88 percent of the energy is saved when plastic is made from plastic rather than from the raw materials of gas and oil.
- Enough plastic bottles are thrown away in the United States each year to circle the Earth four times.

We cannot be sure what will happen in the future but we do know that things are changing now. In many countries of the world people are saying, "We must do something about our rubbish. We don't want our world to become one big landfill site."

1. Answer the questions.

1. Which fact about recycling was surprising for you?
2. Which fact about recycling was dreadful for you?
3. What are the stages of the recycling process?
4. Why is it important to tell children about recycling?
5. What can children do for recycling?
6. Should we think about recycling at our workplace?
7. What is the role of government in recycling process support?
8. In what way can we save water, paper, metal and plastic using recycling?

2. Underline the correct words and phrases.

1. It's best to take *cotton/ plastic* bags to the supermarket.
2. Buy things that *last a long time/ can be thrown away quickly*.
3. Fruit *needs/ doesn't need* a lot of packaging.
4. Plastic bags *are only useful for shopping/ can be used for many things.*
5. You *can/ can't* save the environment by yourself.

3. Tick YES or NO. Explain your choice.

1. Recycling is a waste of time.	Yes	No
2. We can all do something to help recycling.	Yes	No
3. People will only recycle if they are paid to do it.	Yes	No
4. In Ukraine we should do more to recycle.	Yes	No
5. People need to learn about recycling when they are young.	Yes	No

4. Think about the answers to these questions.

1. Which country is the best at recycling?
2. What are the most difficult things to recycle?
3. What do you know about recycling in Ukraine?

5. Find more information about that interest you about recycling. Make a poster or give a talk to your group. Here are some ideas.

- Write a report on the rubbish that your family (or friends, or group, or place of work) makes in one week. What can you do to recycle more?
- Design a bag with a recycling message that shoppers can use.
- Talk to an older person about recycling in the past. What was different then? What did people do before there were plastic bags? What could we learn from this?

A – Z WORD LIST

A

accordingly – *відповідно, у такий спосіб*
acidification – *окислення*
adjust – *регулювати, упорядковувати*
adverse – *шкідливий, ворожий*
aggravate – *погіршувати, загострювати*
alarming rate – *тривожний показник*
alter – *змінювати, мінятись*
appliance – *пристрій, електричний прилад*
appropriate – *відповідний, привласнювати*
attest – *підтверджувати, свідчити*
attitude – *позиція, відношення, ставлення*
audit – *перевіряти, опитувати споживачів*

B

basement – *основа, фундамент*
benefit – *вигода, користь, допомагати, благотворно впливати*
beverage – *питво, напій*
billboard – *рекламний щит*
biodegradable waste – *відходи, що розкладаються мікроорганізмами*
biodegrade – *розпадатися під дією мікроорганізмів*
biodiversity – *біологічна різноманітність*
blanket – *загальний, дорожнє покриття, включати в себе*
byproduct – *побічний продукт*

C

cancer – *захворювання на рак*
carbon emission – *випущення вуглецю*
carbon monoxide – *чадний газ*
cardiovascular disease – *серцево-судинне захворювання*
carry out – *виконувати, здійснювати*
ceiling – *стеля, максимум*
chasing arrows – *стріли розташовані по замкнутому колу*
chest pain – *біль у грудях*
circumstance – *обставина, умова, факт*
clothesline – *мотузка для розвішування і сушіння білизни*
contaminant – *забруднююча речовина*
contamination – *забруднення, зараження*

coolant – *охолоджувач, охолоджуюча речовина*
combustion – *згорання, горіння*
contemporary – *сучасний, одночасний*
consequence – *наслідок*
congestion – *скупчення*
compete – *суперничати, конкурувати*
consideration – *розгляд, обміркування*
concern – *відношення, стосунок, мати відношення, описувати*
crucial – *вирішальний, критичний*
commitment – *зобов'язання, здійснення*
cut back – *зменшувати, скорочувати*
commuting – *поїздка на роботу і додому*
continuous loop – *безперервна петля*
crucial – *ключовий, вирішальний, критичний*
competitiveness – *конкурентоспроможність*

D

deployment – *розподіл, розміщення*
discharge – *розряджати*
disposal – *розміщення, розташування*
disaster – *катастрофа, лихо*
developmental – *експериментальний, еволюційний*
dissolve – *розчиняти, розкладати*
definitive – *остаточний, безповоротний*
disperse – *розповсюджувати*
destruction – *знищення. зруйнування*
device – *прилад, прийом*
dire – *жахливий, страшний*
dispose of – *розміщати, упорядковувати*
denudation – *оголення, ерозія (геол.)*
designate – *встановлювати, вказувати*
domain – *володіння, галузь, сфера*
deplete – *виснажувати, вичерпувати (запас)*

E

effort – *зусилля, спроба*
engage - *залучати*
evidence – *факти, наочність, дані*
environmentalism – *рух у захист оточуючого середовища*
equation – *прирівнювання, зрівнювання, баланс*
emission – *викид, виділення*
enabler – *той хто допомагає іншому достигнути бажаного*

exposure – *піддавання зовнішньому впливу*
escalating – *загострювати конфлікт, збільшуватися*
engine – *двигун*
escape – *втеча, рятунок, виділення*
earn money – *заробляти гроші*
enormous – *величезний, жахливий*
eggshell – *яєчна шкарлупа, крихкий*

F

failure – *невдача, провал*
felling – *валка лісу*
fertilize – *добриво, вносити добрива*
fiber – *волокно*
fluorescent bulb – *флюоресціюча лампа*
fossil fuel – *викопне паливо*
fuel – *паливо*
furnace – *піч, топка (котла)*

G

garbage – *сміття, мотлох, кухонні покидьки*
gasoline – *газолін, бензин*
good – *добро, товар*

H

hang – *підвішувати*
hazardous – *небезпечний, ризикований*
haze – *сушити, серпанок*
headache fatigue – *головний біль, втома*
hence – *отже, в результаті, віднині*
huge – *величезний, гігантський*
humankind – *людство*
hurricane – *тропічний циклон, ураган*

I

inhabit – *населяти, жити*
impact – *поштовх, вплив, впливати, укріплювати*
interference – *втручання*
inappropriate – *непридатний, непідхожий*
incinerator – *сміттєспалювальна піч*

induce – *спонукати, схиляти, визивати*
infant – *немовля, дитина*
insulate – *ізольований, відокремлювати*
incandescent – *яскравий, гарячий, розпечений*
initial – *початковий, первісний*
indispensable – *необхідний, обов'язковий*
item – *питання, пункт, повідомлення*
indestructible – *незруйнований*

L

leaching – *вилуговування*
lead – *свинець*
leakage – *розсіяння, витікання*
lethally – *смертельний, літальний*
light – *світло, світлий, запалювати*
littering – *розкидати сміття*
livestock – *домашня худоба*
logger – *лісоруб*
lung disorder – *порушення функції легенів*

M

miracle – *чудо, диво*
mislead – *обманювати*
mitigate – *пом'якшувати, зменшувати*
motor vehicle – *автомобілі*

N

nausea – *нудота*
nitrogen oxide – *оксид азоту*
noise – *шум, перешкода*
nonetheless – *проте, все*
nonpoint source – *не акцентоване джерело*

O

observable – *помітний, вартий уваги*
oil refinery – *нафтопереробний завод*
ongoing – *той що відбувається в теперішній час*

outweigh – *бути більш впливовим, бути важчим*
overhead power lines – *повітряні лінії електропередач*
overview – *загальне уявлення, огляд*

P

particulate matter – *речовина (матеріал) у формі мікрочастинок*
point source – *акцентоване джерело*
prompt – *спонукати, штовхати*
pollutant – *забруднюючий агент, речовина*
property – *власність, властивість*
power plant – *електростанція*
petrochemical plant – *нафтохімічний завод*
prematurely – *передчасно*
persistence – *наполегливість, стійкість*
power – *сила, енергія, можливість*
proliferation – *швидке розмноження, поширення*
precious – *дорогий, дорогоцінний*
purchase – *купівля, придбання, одержати, завоювати*
pound – *подрібнювати*
procurement – *отримання, придбання*

R

radioactive fallout – *радіоактивні опади, негативний наслідок чого-небудь*
release – *випускати, звільняти*
respiratory illness – *захворювання дихальних шляхів*
runoff – *тікати, утікати*
rupture – *розрив, розривати*
rig – *обладнувати, оснащати*
rash – *висип*
roof – *дати притулок, притулок*
recycle – *повторно використовувати*
reverse – *протилежність, повністю змінювати*
retain – *підтримувати, зберігати, пам'ятати*
recycling – *повторне використання*
raw materials – *сировина*
relevant – *відповідний*
rubbish – *сміття, мотлох, непотріб*

S

seek – *шукати, намагатися знайти, добиватися чого-небудь*

sulphur dioxide – *сірчаний газ, двоокис сірки*
spill – *проливати, розсіювати*
significant – *важливий, значний, істотний*
scarred landform – *ушкоджена зелена поверхня*
strip mining – *відкрита розробка, добування*
storage – *зберігання, сховище*
solid waste – *тверді відходи*
space debris – *космічне сміття*
sewage – *нечистоти, стічні води*
scale – *луска, лущитися, чистити*
sickness – *хвороба*
specie – *металеві гроші*
severity – *суворість, серйозність*
solution – *розчин, вирішення*
seal – *герметизувати, затверджувати*
scramble – *прибиратися, боротися*
standby – *не втручатися, підстраховувати*
soft drinks – *безалкогольні напої*
substitution – *заміщення, заміна*

T

trespass – *зловживати, спричиняти шкоду*
throw – *кидати, викидати*
trash – *непотріб, відходи*
throat inflammation – *запалення горла*
turn off – *вимикати*
turn down – *зменшувати (світло, газ)*
timber – *дерев'яний, стройовий ліс*
thereby – *у зв'язку з цим, за допомогою цього*
trap – *заманювати в пастку, ловити капканом*
trash – *непотріб, сміття, макулатура*
throwaway – *непридатна річ*
tremendously – *надзвичайно, жахливо*

U

ubiquitous – *всюдисущій, повсюдний*
undergo – *піддаватися, відчувати*
underway – *в процесі розробки, шляховий*
untreated – *необроблений*
utility – *практичність, вигідність, рентабельність*

V

vegetation – *рослинність*
virgin material – *природний матеріал*
voluble organic compounds – *органічна складова, що легко обертається*

W

warfare – *війна, військові дії*
weapon – *зброя, засіб боротьби*
weatherize – *герметизувати, ізолювати від атмосферного впливу*
wisely – *мудро, розсудливо*
wreck – *катастрофа, аварія, загибель*

USEFUL PHRASES

I. *Asking for opinions*
What do you think?
How do you feel about this?
What's your opinion of … ?

II. *Giving your opinion*
I think…
In my opinion …

III. *Agreeing and disagreeing*
I agree.
I think so too.
Yes, that's right.

I'm afraid I don't agree.
No, sorry, I disagree.

IV. *Recommending*
I recommend …
Have you thought about …?
If I were you, I would …
You should/shouldn't …

V. *Expressing certainty*
I'm sure …
There's no doubt …
I'm absolutely certain.

VI. *Expressing probability*
There's a good chance …
It's probable …

VII. *Making a presentation*
Introducing yourself and your talk
Let me first introduce myself.
I'm / My name is …
I'm here today to talk about/tell you something about …
I'm going to be speaking about …
Feel free to ask questions as we go along.
There will be time for questions at the end.

Structuring the presentation

Firstly/ Secondly/ Thirdly/ Finally …
Let's now look at …
Moving on, I'd like to say something about …
Now we come to …

Referring to visuals
As you can see in this slide, …
This (next) slide shows …

Introducing graphs and diagrams
I'd like you to look at this graph / diagram / (pie) chart / slide.
This graph shows …
You can see here that …

Concluding
So, to summarize / sum up …
In conclusion …
Thank you for attention.
Are there any questions?

VIII. ***Rendering of the text***

The title of the text (article, abstract, report) is …	Назва тексту (статті, уривку, доповіді) …
The author of the article is …	Автор статті …
The main idea of the article is …	Головна ідея статті …
According to the text …	Згідно з текстом …
As it is described in the text …	Як описано у тексті …
As it is said in the text …	Як сказано у тексті …
According to the figures (data, information, opinions) from the text …	Згідно з цифрами (даними, інформацією, думками) тексту …
It seems to me (that) …	Мені здається що …
I would like to say that …	Мені хотілось би сказати що …
I think that …	Я вважаю що …
I suppose …	Я припускаю …

ABBREVIATIONS

CO	carbon monoxide
CO_2	carbon dioxide
SO_2	sulphur dioxide
CCA	Container Corporation of America
BTU's	British Thermal Units
PET	polyethylene terephthalate
HFCs	Hydrofluorocarbon
CFCs	Chlorofluorocarbons
CLFs	Compact Fluorescent Lamps
pH	hydrogen ion exponent
CFH	chlorinated hydrocarbons
PVC	polyvinylchloride
UNO	United Nations Organization

ANSWER KEY

Unit 1

page 8

3. 1.c 2.a 3.b 4.e 5.d

page 9

4. 1.d 2.e 3.a 4.b 5.f 6.g 7.c

5. 1. pollutants
2. air pollution
3. radioactive substances
4. carbon dioxide
5. nuclear science
6. the vehicles
7. pollution control

Unit 2

page 16

4. 1.b 2.d 3.a 4.f 5.g 6.e 7.c

page 17

5. 1. global warming
2. human activities
3. deforestation
4. planet's atmosphere
5. carbon dioxide emissions
6. sprays
7. carbon emissions

Unit 3

page 24

3. 1.b 2.f 3.d 4.c 5.g 6.e 7.a

4. 1. the recycling symbol
2. plastic bottles
3. recycling
4. recycling
5. recycling paper
6. Earth Day

Unit 4

page 31

3. 1. cotton
2. last a long time
3. doesn’t need
4. can be used for many things
5. can

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