

ENVIRONMENTALLY YOURS

保护你的生存环境

E·蒂姆斯



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Environmentally Yours

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(附中文注释)

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内容介绍

本书是麦克米伦出版公司出版的最新英语泛读教材。文字精练，选词实用，具有知识性和趣味性相结合的特点。本书使用的语言易学、易记、易用，是学好英语的理想读物。本书选取当前各国最关心、最热门的话题作为阅读教材，具有浓厚的时代感和实用性，学生读起来不会感到乏味。为了方便读者，现加中文注释，使读者能更好地理解原文。

Environmentally Yours

E. Times

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前 言

本书是世界著名的英语教学出版社麦克米伦公司专为外国人学习英语编写的最新阅读教材。文字精练，选词实用，具有知识性和趣味性相结合的特点。文章使用活的语言，易学、易记、易用，是学好英语的理想读物。

环境问题是当前世界各国最关心、最热门的话题，商品社会的高度发展所带来的污染和浪费对人类造成前所未有的威胁。一方面，人类的食物、饮水、空气、声音等等都变成了损害健康的东西；另一方面，人类又在大量生产、制造无用的东西，造成环境的更大污染，以至人们对未来抱有悲观的态度，对人类的高度发展提出疑问，对传统的价值观发生动摇。为了迈向一个美好的世界，必须把商品发展和环境治理结合起来，通盘考虑。

本书选取这类热门话题作为阅读教材，当然有浓厚的时代感和实用性，学生阅读起来，再也不会感到乏味和学而无用了，这对学好英语是至关重要的。为便于我国学生使用，我们对书中的词语做了详尽的汉语注释，这就能更好地理解原意，省去查阅词典的时间。

本书适合学习英语的学生和自学英语的人使用，也可以作为扩大知识范围的读物，亦可成为英语教学的补充材料。

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Teach your children what we have taught our children: that the Earth is their mother. Whatever befalls the Earth befalls the sons of Earth. If men spit upon the ground, they spit upon themselves. The Earth does not belong to man, man belongs to the Earth.

—— Chief Seattle of the Squamish Indians in 1851

INTRODUCTION

It's a wonderful world we live in. Our planet works on a system of natural checks and balances where nothing goes to waste. Everything has a purpose and everything has a use.

5 The sun provides energy that heats the Earth and makes plants grow. Its heat makes the water in the rivers, lakes and seas evaporate and form the clouds in the sky. From the clouds comes rain to provide the water that is needed by all forms of life.

10 The animals on Earth breathe in oxygen and breathe out carbon dioxide. Plants breathe too. They make their food by a process called photosynthesis. This uses carbon dioxide, chlorophyll (the green substance in leaves) and sunlight. In this way they take in much of the carbon dioxide
15 that the animals breathe out. The plants then release oxygen as their waste product, which is then breathed in by the animals.

Some animals are predators — they prey on other animals for food. If there were no predators, the herbivores
20 (the animals that eat plants) would increase their numbers so much that they would starve through lack of food. And when animals die of diseases, their bones are picked clean by the carrion-eaters, such as crows, vultures and jackals. When they have had their feast, the insects and worms

move in to finish the job. It's a neat way of making sure that rotting carcasses do not remain to spread disease.

So the Earth has a perfect system of give and take, of balance and proportion. Unfortunately, this balance of nature has been disturbed. Some environmentalists have been warning of this for many years — as long ago as 1896, Swedish scientist Svante Arrhenius predicted the effect that a doubling of carbon dioxide in the atmosphere would have on global temperatures.

Today the concern is much more widespread. Not a day goes by without an environmental, or 'green', issue being in the news. Often it's bad news — another rain forest destroyed, or a further increase of greenhouse gases. Sometimes it's good news — more cars using unleaded petrol, a new recycling scheme, or investments in windmills to provide clean, renewable energy.

The deterioration of the environment is a worldwide issue. It affects each and every one of us, no matter where we live, and to improve the situation will take a worldwide effort. But this effort need not — some say *would* not — come from governments alone. As individuals, we can have an impact on the future of our Earth.

Environmentally Yours looks at and explains the many problems that face us today: the greenhouse effect, the destruction of the ozone layer, acid rain, deforestation, toxic waste, endangered plant and animal life, the depletion of some of our energy resources. It explains how the methods we use in farming and industry, our transport and our everyday life, are contributing to these environmental dangers.

Scientific forecasts are also given for the future if we simply continue as we are doing today.

If, as you read through the first three chapters, you begin to feel as if you are living on a doomed planet, read on. Chapter Four reviews some of the many suggestions that have been made for steps that could be taken by governments and businesses to fight these environmental problems.

The issues of our environment — what's wrong, and what can be done — are the issues of a great debate. Many scientists believe that modern technology is the answer to all our problems. Many others question this, and say that we must adopt a new way of thinking about the Earth and our future on it. We must find a new and safer way of living to conserve our world for our children, grandchildren and great-grandchildren, for if we go on in the same old way, what sort of inheritance will we leave them?

Environmentally Yours gives you the facts and the forecasts, the problems and their possible solutions, that will enable you to join in this debate. Find out what's going on, and find out what you can do. Remember, it is *your* world.

CHAPTER ONE

What's Wrong?

It seems that in some ways we human beings are just too clever for our own good. We have linked our natural inventiveness and creativity to our desire for progress, but the result may be that we are killing our planet.

The evidence of this is all around us. Many species of animals have been wiped off the face of the Earth, and we have lost many plants and insects that were never even properly recorded. We're living amidst the pollution of litter and waste we have created ourselves — fumes from car exhausts, throwaway packaging and an abundance of junk mail are just a few examples. This is more obvious if you live in a town, but things are just as bad in the country.

The country air, once clean and fresh, now may be carrying chemical pollutants from power stations and factories. The streams may look clear and sparkling, but many of them carry nitrates, pesticides and other chemicals down to the reservoirs that provide our drinking water. Some of our rivers and streams are now empty of fish, because they have all been killed by the poisonous brew. And in some rivers you can even see the thick foam caused by chemical wastes.

In the fields, the soil is full of poisonous chemicals that have been sprayed on crops to prevent disease and kill insects. These pesticides have killed birds, mice, foxes and badgers too. Many of the creatures that have survived the chemicals are struggling for existence as marshlands are drained, trees are felled and hedgerows are rooted up.

Go to the seaside and you can't fail to see the pollution around you. Litter is scattered on the beaches. Some of it has been dropped that day by careless people and some has been brought in by the tide. Sewage floats in the water. The majority of Britain's beaches are considered by doctors to be a potential health hazard. And in the long hot summer of 1989, the clear waters off the Cornish coast were tainted by a slimy orange algae that few swimmers wanted to brave.

The various kinds of pollution and waste caused by the way we live today all contribute in different ways to our main environmental problems. And most of these problems are interconnected. For example, the destruction of forests does not just deprive animals and plants of their natural habitats: it also contributes to the greenhouse effect. In looking at these environmental problems one by one, remember that anything we do to improve things in one area often helps improve another area too.

The greenhouse effect

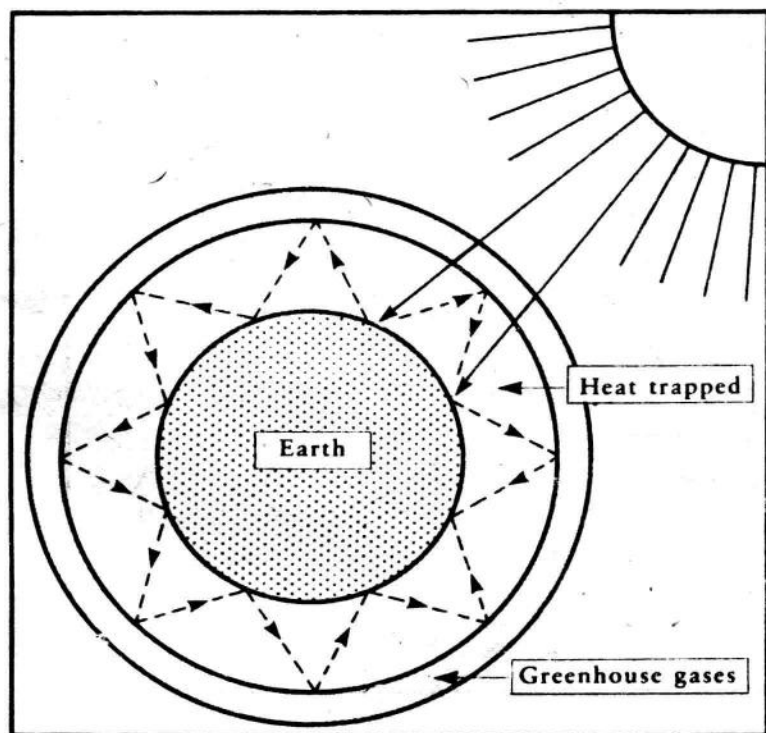
The gases that exist naturally in the Earth's atmosphere let the sun's rays through to warm us, and they also trap some of the sun's heat, rather like the glass in a greenhouse does. If they did not, the Earth would be a frozen planet.

The problem we have to tackle is that the level of gases which trap the sun's heat is rapidly rising and the result is a kind of blanket in the air. The 'blanket' prevents an increasing amount of heat from escaping from the Earth's surface and so the global temperature is beginning to rise.

In the bleak days of a British winter, this may seem to be a good idea. In fact, it could be disastrous.

The cause of the greenhouse effect is the rise in concentration of the following gases:

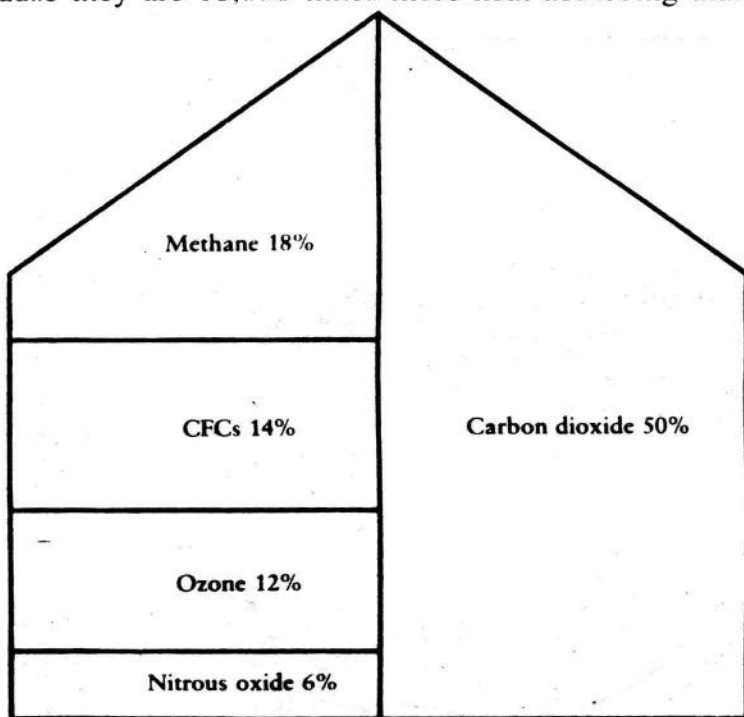
Carbon dioxide: this is responsible for 50 per cent of the greenhouse effect. Its increase is caused by burning coal, oil and gas (fossil fuels), wood, and petrol in motor ve-



hicles. Its rise is being accelerated by the cutting down and burning of forests, especially the tropical rain forests.

Methane: this accounts for 18 per cent of the greenhouse effect and is twenty times more heat-absorbing than carbon dioxide. Its increase is due to people clearing forests and replacing them with cattle ranches and rice-growing paddy-fields. The flooded paddy-fields give off methane, and so does cattle manure.*

Chlorofluorocarbons (CFCs): these are more commonly mentioned in relation to the ozone layer (see page 9-10), but are also a recent addition to the greenhouse gases. Because they are 10,000 times more heat-absorbing than car-



bon dioxide, they are responsible for 14 per cent of the greenhouse effect.

Ozone: this accounts for 12 per cent of the greenhouse effect. It's given off in towns and cities as a result of sunlight mixing with airborne pollutants. It is not the same gas as the high-level ozone in the atmosphere that is being reduced (see below).

Nitrous oxides: these are released by nitrogen fertilizers, vehicle exhausts and the burning of fossil fuels, and are responsible for 6 per cent of the greenhouse effect.

10

The destruction of the ozone layer

Ozone is a gas that forms a layer in the upper atmosphere. It's a kind of oxygen that absorbs the ultra-violet radiation from the sun. It's these ultra-violet rays from the sun that burn our skin. Sunblock creams can screen out these burning rays, but they're not as effective as the ozone layer. Without it we wouldn't be able to go out at all unless we wore dark glasses and covered ourselves completely.

So when scientists discovered a hole in the ozone layer in 1987, it caused much alarm. The hole was over the Antarctic and it was as large as the United States. Thinning in the ozone layer was later discovered in the Arctic too.

■ Chlorofluorocarbons

It's largely the use of chemicals called chlorofluorocarbons (CFCs) that's destroying the ozone layer. It may be hard to believe that by using hairspray you are affecting a gas thousands of miles away, but it is true. The CFCs con-

tained in most aerosols rise into the atmosphere. Their chlorine component combines with an oxygen atom from a molecule of ozone. This forms ordinary oxygen and chlorine monoxide, thus destroying the ozone. CFCs are also used in refrigerators and air-conditioning systems and in the manufacture of the lightweight packaging you see as hamburger containers and some egg cartons.

Britain is at present the biggest producer and exporter of CFCs in Europe. The whole of Europe produces 36 per cent of the world's CFCs, the United States is responsible for 37 per cent and Japan 12 per cent.

Acid Rain

In 1866, black snow fell in Scotland. It was the result of particles of dirt in the air. Six years later, in 1872, the term 'acid rain' was coined. And that's a good example of just how long it has taken us to wake up to what we are doing to the environment.

We now use 'acid rain' to describe all kinds of pollutants that are carried up into the air and fall back to Earth in the form of rain, snow or fog. The pollutants combine with the moisture in rain and snow clouds to form sulphuric acid, nitric acid and other chemicals. The rain formed like this is between four and a thousand times more acid than normal rainfall. When it falls to Earth it damages trees, lakes and streams, buildings and people.

The main chemical culprits that reach the atmosphere are sulphur dioxide and nitrogen oxides. Natural events such as forest fires and volcanic eruptions are responsible for a cer-



West Germany's environmentalists have fixed this protest poster with the slogan saying "The forest dies here" to the stump of a dead tree at the Black Forest near Freiburg. December 1983. © WWP

tain amount, but these chemicals are produced in much larger quantities by the burning of fossil fuels — gas, coal and oil.

Power stations produce much of the sulphur dioxide. They can be fitted with devices called flue-gas desulphurization systems to cut the amount of gas given off, but in Britain we have not yet done this. Power stations produce nitrogen oxides too, as do other industrial processes, and half of them come from vehicle exhausts.

Deforestation

All over the world, the forests are disappearing. This is not just because of acid rain and other pollution. People are cutting the trees down to clear land for growing crops and keeping cattle. Sometimes they want the timber for building houses and making furniture. Sometimes they simply need it for fuel.

People have always cut down trees to use their wood. But in the past, there weren't so many people. Now the trees are being used faster than new trees can be grown. Forests the size of Belgium are destroyed every year in the less-developed countries of the world. In 1987 alone, Brazil lost 20 million acres of forest. Even if new trees are planted, a hardwood tree, for example, takes many years to mature.

Trees give off oxygen and absorb carbon dioxide — fewer trees mean less carbon dioxide is absorbed. The burning of trees to clear forests also releases more carbon dioxide into the atmosphere, increasing greenhouse gases. Deforestation has other effects as well. The tropical rain