

# Practical English

# 实用英语

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## 前 言

《大学英语教学大纲》(修订版)明确指出:要保证本科生英语学习四年不断线。这是符合外语教学客观规律的,尤其符合在非母语环境下外语教学的客观规律。四年的大学英语学习应包括基础阶段学习和应用提高阶段学习。仅完成两年的基础阶段学习,通过四六级考试并非英语学习的终结,而是进入应用提高阶段的一个重要步骤。通过应用提高阶段的教学,借以巩固基础阶段的教学成果,培养学生用英语获取和交流本专业信息的能力,进一步提高语言交际能力,加强文化素养并激发学习英语的兴趣。

然而,现实的情况却不容乐观,《大纲》里强调的“专业英语阅读阶段”——学生从学习英语到使用英语的重要转折过程,在很多院校尚未实施或实施不力。造成这种状况的重要原因之一在于,各院校之间、院校内部各系部专业之间存在实际差异,缺乏统一的、合适的教材。为此,我们经过调研、论证,并结合实际编写了此书,以满足英语

教学的迫切需要。

本书共 15 个单元 ,每单元涉及某一个专业或科技领域的内容。学生在学习过程中可广泛涉猎各学科及科技领域的最新发现和成果 ,从而实现通过英语学习获取专业信息的目的。每单元包括课文、注释、练习和补充阅读四个部分。其中 ,练习部分包括阅读理解、词汇练习、文摘翻译、写作指导等几大项 ,突出强调英语实际应用能力的培养。

本书可作为高等院校非英语专业本科生三年级英语教材 ,也可供专科生、英语自学者及科技爱好者使用。由于时间仓促 ,书中难免有欠妥之处 ,望广大读者、同行批评指正。

编者

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# *Unit 1*

## A Clean World or a Polluted World ?

[ 1 ] Consume , consume , consume ! Our society is consumer-oriented — dangerously so. To keep the wheels of industry turning , we manufacture consumer goods in endless quantities , and , in the process , are rapidly exhausting our natural resources. But this is only half the problem. What do we do with manufactured products when they are worn out ? They must be disposed of , but how and where ? Unsightly junkyards full of rusting automobiles already surround every city in the nation. Americans throw away 80 billion bottles and cans each year , enough to build more than ten stacks to the moon. There isn ' t room for much more waste , and yet the factories grind on. They cannot stop because everyone wants a job. Our standard of living , one of the highest in the world , requires the consumption of manufactured products in ever-increasing amounts. Man , about to be buried in his own waste , is caught in a vicious cycle. " Stop the world , I want to get off , " is the way a popular song puts man ' s dilemma.

[ 2 ] It wasn ' t always like this. Only 100 years ago man lived in harmony with nature. There weren ' t so many people then and their wants were fewer. Whatever wastes were produced could be ab-

sorbed by nature and were soon covered over. Today this harmonious relationship is threatened by man's lack of foresight and planning, and by his carelessness and greed. For man is slowly poisoning his environment.

[ 3 ] Pollution is a " dirty " word. To pollute means to contaminate — to spoil something by introducing impurities which make it unfit or unclean to use. Pollution comes in many forms. We see it, smell it, taste it, drink it, and stumble through it. We literally live in and breathe pollution, and, not surprisingly, it is beginning to threaten our health, our happiness, and our very civilization.

[ 4 ] Once we thought of pollution as meaning simply smog — the choking, stinging, dirty air that hovers over cities. But air pollution, while it is still the most dangerous, is only one type of contamination among several which attack the most basic life functions.

[ 5 ] Through the uncontrolled use of insecticides, man has polluted the land, killing the wildlife. By dumping sewage and chemicals into rivers and lakes, we have contaminated our drinking water. We are polluting the oceans, too, killing the fish and thereby depriving ourselves of an invaluable food supply.

[ 6 ] Part of the problem is our exploding population. More and more people produce more wastes. But this problem is intensified by our " throw-away " technology. Each year Americans dispose of 7 million autos, 20 million tons of waste paper, 25 million pounds of toothpaste tubes and 48 million cans. We throw away gum wrappers, newspapers, and paper plates. It is no longer fashionable to reuse anything. Today almost everything is disposable. Instead of repairing a toaster or a radio, it is easier and cheaper to buy a new one and discard the old, even though 95 percent of its parts may still

be functioning. Baby diapers , which used to be made of reusable cloth , are now paper throw-aways. Soon we will wear clothing made of paper “ Wear it once and throw it away , ” will be the slogan of the fashion-conscious.

[ 7 ] Where is this all to end ? Are we turning the world into a gigantic dump , or is there hope that we can solve the pollution problem ? Fortunately , solutions are in sight. A few of them are positively ingenious.

[ 8 ] Take the problem of discarded automobiles , for instance. Each year over 40 ,000 of them are abandoned in New York City alone. Eventually the discards end up in a junkyard. But cars are too bulky to ship as scrap to a steel mill. They must first be flattened. This is done in a giant compressor which can reduce a Cadillac to the size of a television set in a matter of minutes. Any leftover scrap metal is mixed with concrete and made into exceptionally strong bricks that are used in buildings and bridges. Man 's ingenuity has come to his rescue.

[ 9 ] What about water pollution ? More and more cities are building sewage-treatment plants. Instead of being dumped into a nearby river or lake , sewage is sent through a system of underground pipes to a giant tank where the water is separated from the solid material , purified , and returned for reuse to the community water supply. The solid material called sludge , is converted into fertilizer. The sludge can also be made into bricks.

[ 10 ] Controlling air pollution is another crucial objective. Without food , man can live about five weeks ; without water about five days. Without air , he can only live five minutes , so pure air is a must. Here the wrong-doer is the automobile. Where there is a con-

centration of automobiles , as in our big cities , air pollution is severe. It is important to see that our cars are equipped with pollution-control devices. Such devices effectively reduce the harmful gases emitted from the engine.

[ 11 ] Power plants , factories , and apartment buildings can also avoid air pollution. When possible they should use clean fuels like gas and oil. And the smokestacks of these buildings should be equipped with filters and other smoke-reduction devices.

[ 12 ] Can we eliminate pollution altogether ? Probably not. Modern man pollutes with everything he does , so total elimination would require drastic measures. Every power plant would have to shut down. Industries would have to close. We would have to leave all our automobiles in the garage. Every bus and truck and airplane would have to stop running. There would be no way to bring food to the cities. There would be no heat and no light. Under these conditions , our population would die in a short time.

[ 13 ] Since such a drastic solution is impossible , we must employ determined public action. We can reduce pollution , even if we can 't eliminate it altogether. But everyone must do his part. Check your car to see if the pollution-control device is working. Reduce your use of electricity. Is air-conditioning really necessary ? Don 't dump garbage or other waste on the land or in the water. Demand that government take firm action against polluters. We can have a clean world , or we can do nothing. The choice is up to you.

## Notes

1. junkyard 废旧物堆置场
2. to grind on 持续不断地苦干

3. to contaminate 弄脏 污染
4. to intensify 加剧 使更剧烈
5. ingenious 有独创性的 精巧的
6. scrap 碎片 废料
7. sludge 泥状沉积物 淤渣
8. smokestack 大烟囱

### Exercises

#### I . Answer the following questions :

1. What do people have to do in order to keep the wheels of industry turning ?
2. Why does the author say that man is about to be buried in his own waste ?
3. Why is the harmonious relationship between man and nature threatened today ?
4. What does " to pollute " mean ?
5. Why is air pollution the most dangerous ?
6. How does man pollute with everything he does ?
7. How do people prevent water pollution ?
8. How do people prevent air pollution ?
9. Can man eliminate pollution altogether ? Why ?
10. How should we do to prevent pollution ?

#### II . Translate the following words and phrases :

A. From Chinese into English

1. 消费品
2. 自然资源
3. 生活水平
4. 恶性循环

5. 最基本的生命机能
6. 污水处理厂
7. 污染控制装置
8. 清除污染
9. 非常措施
10. 公众行为

*B. From English into Chinese*

1. consumer-oriented
2. to live in harmony with nature
3. lack of foresight and planning
4. the fashion-conscious
5. in sight
6. to be equipped with
7. to see ( to it ) that
8. to take firm action against
9. to be up to sb.

**III . Translate the following passages into Chinese :**

**Passage One**

Consume , consume , consume ! Our society is consumer-oriented — dangerously so. To keep the wheels of industry turning , we manufacture consumer goods in endless quantities , and , in the process , are rapidly exhausting our natural resources. But this is only half the problem. What do we do with manufactured products when they are worn out ? They must be disposed of , but how and where ? Unsightly junkyards full of rusting automobiles already surround every city in the nation. Americans throw away 80 billion bottles and cans each year , enough to build more than ten stacks to the moon.

There isn't room for much more waste , and yet the factories grind on. They cannot stop because everyone wants a job. Our standard of living , one of the highest in the world , requires the consumption of manufactured products in ever-increasing amounts. Man , about to be buried in his own waste , is caught in a vicious cycle. " Stop the world , I want to get off , " is the way a popular song puts man 's dilemma.

### **Passage Two**

China has the world 's longest meteorological records , going back over 500 years. They help us clearly to understand the problem of global warming. The five warmest years since the 15<sup>th</sup> century have all been in the 1990s ; 1997 was the warmest year ever recorded. We know that if this trend continues , it will bring more and more severe weather events and it will disrupt the lives of hundreds of millions of people in the world during the coming century. China is already taking impressive steps to protect its future. Leaded gasoline is being banned. Inefficient stoves have been upgraded. People can find out about air quality from newspapers. Communities and provinces and the national government are doing more to clean up rivers. Chinese scientists are fighting deforestation and soil erosion. And citizens are doing more to promote public education about the environment , among families and especially among children.

### **IV . Writing**

1. Summarize the text in about 200 words.
2. Summary

The summary as a condensation is a digest of the main points in an original work. The summary omits introductory matter , details ,

examples , illustrations — everything except the major ideas and facts.

Depending on the writer 's purpose , the summary can take various forms :

It may be a descriptive summary.

It may be an informative summary.

It may be an evaluative summary.

#### **Descriptive Summary**

A summary may describe ; it may state objectively what a work is about in a very general way. The descriptive summary simply indicates the main topics that are discussed. It is usually very brief , sometimes only one or two sentences in length. Such summaries are frequently encountered in the headings to chapters in books , in the headings to magazine articles , on the table of contents pages in magazines , in annotated bibliographies , and in advertisements.

### **V . Additional Reading**

#### **Green Revolution**

##### **— Clean Cars and Energy**

[ 1 ] By 2010 , you may be driving a pollution-free , recyclable car , eating genetically-engineered food grown without pesticides , avoiding rush-hour traffic jams by working and shopping at your home computer , and lighting your home with wind power.

[ 2 ] In the 20<sup>th</sup> century , technology sometimes seemed intent on destroying the environment , bringing us smog-belching cars , toxic waste and polluted waters. But as a new millennium approaches , technology has the potential to help clean up the mess.

[ 3 ] We are on the verge of a “ green revolution ” in the way au-

tomobiles are fueled and energy is generated. And , best of all , the revolution may be relatively painless , sparing affluent consumers the need to sacrifice comfortable lifestyles.

[ 4 ] The innovation creating the most excitement is the development of " fuel cell " technology , which uses hydrogen and oxygen to set off a chemical reaction that produces electricity.

[ 5 ] The fuel cell , originally developed for the U.S. space program and currently in use in the space shuttle , has the potential to replace the internal combustion engine and create motor vehicles that spew harmless water vapor from their tailpipes.

[ 6 ] Motorists would refuel at service stations , pumping liquid methanol that would be converted to hydrogen inside their vehicles. Fuel cells also could act as mini power plants producing clean electricity and hot water inside homes and offices.

[ 7 ] Today , fuel cell technology is too costly to compete with traditional energy sources , but futurists are heartened by the fact that major automobile companies — including Ford Motor Co. — and oil companies — including Atlantic Richfield Co. — are pumping millions into fuel cell development.

[ 8 ] " I think people are realizing that the fastest way to have a positive impact on the environment is not to get rid of automobiles but to make them so that they are much more environmentally benign , " said Glen Hiemstra , a futurist who has served as a consultant to corporations ranging from Boeing Co. to Hewlett-Packard Co.

[ 9 ] Meanwhile , another clean source of power for homes and offices has the potential to help blow away the pollution from traditional gas or coal-fired power plants. Wind power has become the world 's fastest-growing energy source , swelling at a rate of 20% to

30% a year for the past three years to become a \$ 2 billion industry.

[ 10 ] Clusters of up to 100 wind turbines rising more than 130 feet high generate electricity from futuristic-looking " wind farms " stretching from Palm Springs , Calif. , to Jutland , Denmark. The turbines typically have just two or three rotating blades , giving them the look of Spartan windmills. As the blades turn , they extract energy from the wind by slowing it down. A generator attached to the shaft of the turbine creates electricity.

[ 11 ] Although wind power still supplies less than 1% of the world 's electricity , its double-digit growth rates and declining costs give it the potential to become a major source of electricity.

[ 12 ] Improved technology and government incentive programs have helped to lower the costs of wind power in the United States from about 40 cents per kilowatthour to about 5 cents today.

[ 13 ] In the new millennium , wind power 's share of the worldwide energy market could surpass that of hydropower , which now supplies 20% of the demand for electricity. In European nations such as Germany and Spain , wind power already is becoming a major source of energy. In Denmark , it accounts for 8% of the market.

[ 14 ] In the United States , which has lagged in wind power development , Energy Secretary Bill Richardson announced an initiative this summer to ensure that wind power supplies at least 5% of the nation 's electricity by 2020.

[ 15 ] " Wind power is still considered a laughing matter by many energy industry executives , " an energy expert comments. " But soon , such people may look almost as silly as those who once

called the airplane an absurd idea. ”

[ 16 ] In the midst of this revolution in power , continuing advances in computer technology may help us save some human energy as well. Increasingly , U. S. workers will be able to do at least a portion of their work on faster , more efficient home computers , avoiding the need to join rush-hour traffic jams on the way to and from the office.

[ 17 ] Corporate attitudes that have slowed the expansion of telecommuting have changed dramatically in the past three years as bosses realize they don ’ t need to be able to gather their employees in the same place to supervise them effectively.

[ 18 ] At the same time , early efforts at “ E-commerce ” will balloon in the next decade , making it routine for American consumers to shop online. That will help the environment by cutting down on the number of car trips we make to run errands.

[ 19 ] Here are some of the other environmentally friendly developments that US scientists expect within the next decade.

[ 20 ] Genetic engineering and plant manipulation will reduce the harmful impacts of agriculture on the environment. Crops will be engineered to be more resistant to pests and to use their nutrients more efficiently , reducing the need for pesticides and fertilizers , which are major causes of water pollution.

[ 21 ] Cars will become lighter , increasing fuel efficiency. Cars that still run on gasoline will get 80 miles to a gallon. This doesn ’ t mean cars will get any smaller. Rather , they will be lighter because they will be built with less steel and more aluminum , magnesium , titanium and composites.

[ 22 ] Cars , computers , plastics and paper will become more