



A
COURSE
OF
SCIENTIFIC
AND
TECHNICAL
ENGLISH

科技英语教程

主编 张正举

湖南大学出版社



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科技英语教程

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内 容 简 介

本书是根据大学英语基础后阶段的教学要求,为大学英语后续课程教学而编写的一本科技英语教材,旨在解决大学英语从基础阶段过渡到专业阅读阶段的衔接问题。本书适合大专院校三年级学生和广大科技工作者,并且对参加大学英语六级和研究生考试的读者也大有帮助。

科技英语教程

Keji Yingyu Jiaocheng

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前 言

《科技英语教程》是一本供理工科本科生在修完大学英语四级课程之后、学习专业英语阅读课程之前使用的教材。之所以要设置这一中间过渡课程,目的在于让学生全面熟悉科技英语的词汇、结构、语篇、文体等书面的特点,为专业英语阅读打好基础。这一构想是湖南大学为提高学生的外语素质使外语教学质量上一个新台阶的总思路的一个重要组成部分。本教程就是本着上述宗旨编写的。教材分上篇和下篇。上篇包括 15 个单元,每一个单元有正课文一篇,阅读课文一篇,科技英语词汇学习和科技英语结构学习。并配有词汇和结构练习;下篇包括两个专题讲座,科技英语翻译和科技英语写作,并分别配有翻译和写作练习。书后附有全部练习答案。

本教程由湖南大学外语教学研究所组织编写。张正举教授负责设计教程的总体框架,提出教程编写的指导思想和目的要求。全书由汕头大学陆魁秋(副主编),湖南大学陈登、彭晓虎、彭珮璐集体合作编写。具体分工如下:

陆魁秋:第 2 单元、第 10 单元;陈 登:第 6 单元 第 7 单元、第 8 单元、第 9 单元、科技英语翻译;彭晓虎:第 11 单元、第 13 单元、第 14 单元、第 15 单元、科技英语写作;彭珮璐:第 1 单元、第 3 单元、第 4 单元、第 5 单元、第 12 单元。

初稿完成后,陆魁秋负责上篇的统稿工作,张正举负责下篇的统稿工作。

教程在编写过程中,得到湖南大学领导和汕头大学领导的指导和帮助,在此向他们表示衷心的感谢。

编写这样的教程是我们的初次尝试,疏漏和不足之处在所难免,敬请使用本书的老师、同学批评指正。

编者

1996年5月1日

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Unit 1

Environmental Pollution

On a road leading to Washington, D. C. , a 1968 two-door green convertible breaks down. The driver gets out of the car and walks away, with no intention of returning. The car thus becomes a statistic; one of the more than 5 000 000 automobiles discarded in the United States every year. Their rusting, broken bodies mar the landscape of the entire nation.

On the French and Italian Rivas, tourists no longer see deep-blue, sparkling waters. The Mediterranean is turning gray. Rivers and canals pour sewage, detergents, and industrial wastes into its waters; tankers flush their holds near the coast; bottles, rotting garbage, and oil slicks wash onto the beaches.

In Singapore, noise causes a variety of physical and psychological stresses. Suicides in high-rise apartment buildings are often attributed to neighbors' radios, construction machinery, and traffic noise. Even the clacking of Mah-Jongg tiles has been criticized.

In the Soviet Union, a chemical manufacturing complex near Leo Tolstoy's former estate has been discharging chemical wastes into the air for ten years. As a result, oak and pine forests in this internationally known tourist area are being destroyed.

These are not isolated incidents. Rather, they are part of a worldwide pollution crisis caused by our mismanagement of the environment. We have poisoned the air, water, and soil with pollutants. We have upset natural communities in ways that are affecting our own place in the complex system that has been called "the great chain of life". And we may be tipping the balance of great natural forces in the earth, atmosphere, and oceans in ways that could be disastrous for humanity. We have reached a point at which we must begin to protect the environment in order to protect ourselves.

Pollution: Fad or Fact?

Until recently, there were many who asserted that environmentalism was a fad and that man's impact on the environment was a threat only in terms of the interests of a few bird watchers, trout fishermen, and scientists. But as the decade of the 1970s opened, many people began to see serious threats to the quality of the environment. A report, by the United Nations Secretary General's office on environmental deterioration in the face of a rapidly increasing world population states: "The need to provide food, water, minerals, fuel and other necessities for such increasing numbers of people will place pressures on virtually all areas of the earth and demand the most careful planning and management of natural resources. No nation can any longer be isolated from these global pressures."

World leaders have come to recognize that an environmental crisis exists. How serious is this crisis? Perhaps it is not as bad as some scientists believe. Perhaps it is worse. We are be-

coming more and more aware of the seriousness of our impacts on the environment. Each new piece of evidence emphasizes how little we understand the extent of these impacts and the environmental interactions that can grow from some of them. We know, for example, that a large part of city smog comes not from the visible pollutants that belch out of industrial smokestacks, but from chemical reactions produced by the action of sunlight on invisible gases that enter the air in automobile exhaust fumes. We are now discovering that this smog can kill, and is killing, valuable timber. Large-scale destruction of plant life in turn presents a serious threat to all animal life.

Scientists have begun to identify some of the causes of pollution on a local scale. Much less is known about global environmental problems. Guesses are not good enough. We cannot afford to gamble on the proposition that we are creating global environmental catastrophes. We should decide which of our activities need closer examination. Then scientists should evaluate exactly what these activities are doing to the environment and how they are doing it. Finally, their findings should be readily available to decision makers in governmental and other institutions who can guide public policy in directions that will avoid environmental catastrophes.

New Words

- | | | |
|----------------|-----------------|-----------------------|
| 1. convertible | [kən'vɜ:təbl]a. | 可改变的;可变换的;n. 车篷可折起的汽车 |
| 2. discard | [dis'ka:d]vt. | 丢弃,抛弃,遗弃 |

3. attribute to		归因于...
4. Mediterranean	[ˈmedɪtəˈreɪnjən]n.	地中海
5. sewage	[ˈsju(:)ɪdʒ]n.	(阴沟等处的)污水,污物
6. detergent	[diˈtɛ:dʒənt]a.	使干净的; n. 清洁剂,去垢剂
7. flush	[flʌʃ]vi.	奔流; vt. (用水)冲洗
8. slick	[slik]n.	(有一层油膜的)平滑的水面; 油膜
9. clack	[klæk]vi.	作噼啪声; vt. 使作噼啪声; n. 噼啪声
10. Mah-Jongg	[ˈmaːˈdʒʌŋ]n.	[汉]麻将牌
11. tile	[taɪl]n.	(一张)麻将牌
12. tip	[tɪp]vt.	使倾斜
13. fad	[fæd]n.	一时的风尚; 一时的爱好
14. trout	[traʊt]n.	鲑属鱼类的鱼,红点鲑属鱼类的鱼,真鳟
15. deterioration	[diˌtɪəˈreɪʃən]n.	恶化,变坏
16. belch	[beltʃ]& vt.	爆发的(烟、焰等); 一阵阵冒出
17. smokestack	[ˈsməʊkstæk]n.	大烟囱
18. timber	[ˈtɪmbə]n.	木材,树木,树林
19. proposition	[ˌprəʊpəˈzɪʃən]n.	提议,建议,主张
20. catastrophe	[kəˈtæstrəfi]n.	大灾难,大祸; 大败

Notes

1. Washington, D. C. (或 Washington, District of Columbia) 哥伦比亚特区华盛顿
2. Riviera [ˌrɪviˈɛərə]n. [the~] 里维埃拉(法国东南部和意大利西北部沿地中海的假日游憩胜地)
3. Until recently, there were many who asserted that environmentalism was a fad and that man's impact on the environment was a threat only in terms of the interests of a few bird watchers, trout fisherman, and

scientists. 直到最近, 还有很多人认定环境论是一时的风尚, 只有从少数鸟类学家、鱒鱼捕鱼者和科学家的利益出发, 才认为人类对环境的影响是一种威胁。

动词 asserted 后带有两个由 that 引导的宾语从句。

in terms of: 根据, 按照; 从...方面(说来); 以...的措词; 此处意为“从...观点出发”。

4. the United Nations Secretary-General's office: 联合国秘书长办公室

Word Study

1. discharge (卸(货), 解除; 排出, 发射; 释放, 解雇)

1) a. They discharged the ship of its cargo.

b. The factory discharges its waste into the river.

c. The gun discharged with a loud noise.

d. They discharged him from prison.

e. He was discharged from his job.

2) Discharge of the contents of the tank is performed by a pump.

译文: 1) a. 他们从船上卸下货物。

b. 工厂把废物排放到河里。

c. 大炮轰地一声发射了。

d. 他们把他释放出狱。

e. 他被解除了职务。

2) 储水池中的水是由水泵排出。

2. affect (影响; 感动; (疾病)侵袭) influence (影响) effect (n. 影响)

这三个词都含有“影响”的意思。affect 指对...产生影响而引起某种结果或变化。influence 着重指对人或事物起某种作用, 使思想、行为、性格、性质等发生变化, 这种变化常常是潜移默化的结果。effect 表示“影响”时, 是名词。

1) The temperature of the conductor $\left\{ \begin{array}{l} \text{affects} \\ \text{influences} \\ \text{has an effect on} \end{array} \right.$ its resistance to current.

- 2) The high quality of the goods favourably affected the sales.
 - 3) The audience was deeply affected.
 - 4) He was affected with high fever.
 - 5) The wind flow in the atmosphere is also influenced by some other parameters.
 - 6) Outside factors influenced him to resign.
- 译文: 1) 导体的温度影响它的电阻。

- 2) 商品的高质量对其销售产生了有利的影响。
- 3) 听众深受感动。
- 4) 他发高烧。
- 5) 大气中风的流动也受到另外一些参数的影响。
- 6) 外界因素促使他辞职。

3. resource (资源; 物力, 财力; 谋略; 消遣, 娱乐)

- 1) This country is rich in natural resources.
 - 2) They wasted resources and manpower on building old-fashioned ships.
 - 3) Robinson Crusoe was a man of great resource.
 - 4) Music and sewing are her favourite resources.
- 译文: 1) 这个国家拥有丰富的自然资源。

- 2) 他们浪费财力和人力建造过时的船只。
- 3) 鲁滨逊是一个足智多谋的人。
- 4) 音乐和缝纫是她喜爱的消遣。

4. scale (大小, 规模; 标度, 刻度; 比例; 天平盘, 称盘)

- 1) Large-scale destruction of plant life in turn presents a serious threat to all animal life.
- 2) This ruler has one scale in centimeters and another in inches.
- 3) The scale of this map is one inch to 200 miles.
- 4) The butcher weighed the meat on the scales.

译文: 1) 对植物的大规模的损害反过来又构成了对所有动物的威胁。
2) 这把尺有厘米和英寸两种刻度。