

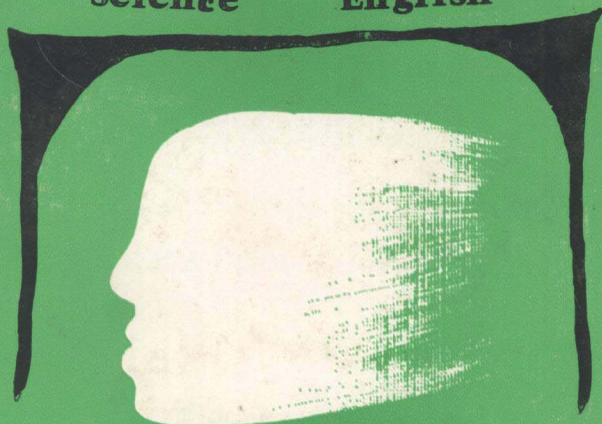
科技英语听力入门

Science

English

Elementary

Listening



朱涵梁 李 潇 编

华中理工大学出版社

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Elementary Science English Listening

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内容简介

本套听力教材含两盒录音磁带(60分/盒)和一本文字对照本,辑录了国内外英语科技报道短文20篇,内容涉及理、工、农、医、交通、航天、海洋、环保、计算机,教育等重要领域近年来的科学技术新成就。

磁带内容大部分以标准美式英语播讲,后几篇采用了英国广播公司和我国中央人民广播电台、中央电视台的科技报道节目,以帮助听众练听各种风格的英语语音。平均语速为(100—120)词/分,后几课语速稍高。短文的篇幅大部分为(400—450)词。每单元设有练习篇,供听众自我检查听力。

文字对照本每课后附有必要的注释和若干习题。书后附有课后习题答案及单元练习答案。

本听力教材适合非英语专业高年级大学生、研究生或其他已初具英语听力者训练科技英语听力之用。

科技英语听力入门

Elementary Science English Listening

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华中理工大学出版社出版发行

(武昌喻家山)

新华书店湖北发行所经销

华中理工大学出版社印刷厂印刷

(激光照排)

*

开本:850×1168 1/32 印张:2.75 字数:53 000

1990年11月第1版 1990年11月第1次印刷

印数:1-3 000

ISBN 7-5609-0498-X/H·61

定价:1.95元

编写说明

本听力材料是第一编者在多年来为华中理工大学及上海大学商学院的研究生和大学生讲授“科技英语听力”的过程中不断总结经验、充实材料,并广泛听取学生意见后选编而成的。全部内容约需 36 学时授完。

本材料选自近几年来世界科技成就英语报导,内容广泛。要求听者一面练习英语听力,同时也着力确切理解其专业含义,改变多年来“以形学语”的传统做法,用“以听领先”来学习科技英语,锻炼及时获取国外信息和参加国际学术交流活动的能力。

内容主要取自 VOA(美国之音)Science Reports,但也选录了一些 BBC(英国广播公司)、我国中央人民广播电台和中央电视台的英语广播节目,使听众可以练听发音和语调不尽一致的各式英语,提高听觉适应能力。

内容大致分类编排如下。第一单元:世界性报导(1—3 课);第二单元:计算机和高技术(4—7 课);第三单元:空间技术和海洋学(8—13 课);第四单元:医学与环境保护(14—16 课);第五单元:语速稍快与其他发音风格的课文(17—20 课)。

在前几课的附注中,适当地列出各连读、弱读示例,以帮助提高听力。各课后还注解一些冷门单词和偏僻国名、地名。为帮助听者更进一步提高听力,最后安排三课语速较快的课文,其中最后一课语速很高,超过通常学术报告或技术交谈的速度。对这些课,估计一般学得较好的也只能听懂大意。听者大可不必为一时听不好这些课而对已获得的成绩表示怀疑,以致对进一步提高听力失去信心。

课文录音虽力求清晰,但因条件所限,个别课文中仍不免有些微杂音窜入。其实,这偶而伴随的一点危害不大的杂音,也许恰能模拟今后实际收听时可能碰到的听力环境。

因未能搜集到原文资料,文字对照本仅由编者根据录音听写、整理而成。编写时强调声、文一致,以满足听力训练需要,而没有过多推敲文字内容编排(如分句、分段等)和标点符号的用法等。对于人名和某些偏僻地名,也只求按音求词,没有要求与实际名字严格一致。

根据编者练习听力的经验教训,奉劝听众在练习听力时不要过多依赖文字材料,而只把它作为检验听力的参考,甚至只作答疑之用。

感谢程恩洪教授为本听力教材作序。

文字材料形成过程中,蒙美藉教师 Milly Kline 精心指导,不胜感激。对华中理工大学(85—88)四届硕士研究生李劲松、叶小秋、黄序、杨丽萍、刘琼、冯茵等付出的劳动,深表谢意。

本材料的录、听、选、编工作由朱涵梁担任并主持,青年教师李潇参加了工作。

恳请各界同行和听众对本材料中不足及错误之处多加指正。

编 者

1990年3月

序

朱涵梁等同志所编的《科技英语听力入门》教学磁带和教材就要出版了,这是件值得庆贺的事。他让我为之作序,我感到不胜荣幸。

据我所知,这套教材原是朱涵梁教授为华中理工大学理工科研究生开设科技英语听力课所使用的材料。他在教学期间边用边改,经过多次修改、整理、充实,才编写成了现在这套教材。

朱涵梁同志所讲授的“科技英语听力课”是十分成功的,1988年曾获学校研究生教学质量优秀奖。我认为朱涵梁同志的成功,原因是多方面的。

首先是他具有刻苦求学、勇于实践的精神。朱涵梁同志不是专门学英语的。他是位工程技术专业教师,然而他的英语相当好。有人说,他有学语言的天赋。这也许是事实,但我认为,更主要的在于刻苦精神和正确的方法。许多人往往满足于一知半解;他却不然,不怕丢面子,不怕出洋相。学习外语,特别是口语,这是一条至关重要的法宝。这法宝说来容易,用起来难。

另外,朱涵梁同志有丰富的专业知识。进行专业英语教学,理工科专业教师有着明显的优势,而一般的英语教师由于知识面的局限,往往难于对付。正因为如此,理工科大学英语教学大纲明确规定:“专业阅读课由专业教师担任教学。”这是有道理的。

朱涵梁同志还有丰富的教学经验,善于发现学生的需要。因此,他所选用的材料,必然受到理工科学生的欢迎。

大学英语教学质量的提高取决于多种因素。大学英语教师固然义不容辞,而专业教师积极承担专业英语课的教学,指导学生阅读专业书刊、收听科技报告,是使学生“能以英语为工具,获取专业所必需的信息”的重要保证。因此,我们热烈欢迎专业教师担负起专业英语课的教学任务,也希望学校领导为他们创造必要的条

件。

关于这套教材的编写结构和意图,编者已在说明中谈了。我国出版了不少普通英语听力训练材料,但是由工程技术专业课教师编写的科技英语听力材料,这还是第一套。我相信,这套教材会受到理工科院校的师生,以及科技工作者和广大的对科技英语感兴趣的英语自学者的欢迎。

全国大学外语教材编审委员会委员
华中理工大学外语系

程恩洪

教授

1990年9月

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Lesson 1

NOBEL PRIZE WINNERS IN PHYSICS AND CHEMISTRY

Three Americans have won this year's Noble Prizes for physics and chemistry. Whilliam Fowler and Indian born Subramajun ChandraShakir won the Noble Prize for physics. They were honored for their discoveries about the birth, development and death of stars.

Dr. Fowler studied the nuclear reactions that happened inside stars. He discovered how these reactions produce the different chemical elements of the universe. Dr. Fowler showed how the simplest kinds* of atoms crash into each other to produce heavier atoms during nuclear reactions inside stars. Those heavier elements continue to crash into each other to produce even heavier elements, and he showed that when* a giant star explodes, it releases forces powerful enough to create the heaviest known chemical elements.

Dr. ChandraShakir studied what happens when* a star uses all its nuclear fuel. Scientists already knew that small stars, the size* of our sun, someday become extremely dense objects called white dwarf stars¹. Dr. ChandraShakir wanted to know what happened to larger stars when they burned all their fuel. He found that if* a star was more than 1.4 times larger than the sun, it would not become a white dwarf star. He said a large star that used all its nuclear fuel would become an object much denser than* a white dwarf. It can become a neutron star

or a black hole, a body so dense that its gravity would not let light escape.

The winner of this year's Noble Prize for chemistry is Henry Toby, who was born in Canada. Dr. Toby was honored for his discovery of how molecules exchange some* of their electrons during chemical reactions. Electrons are the objects that hold the atoms in* a molecule together. Dr. Toby mixed metals with other elements and* observed the chemical reactions that took place. When the electrons moved from one molecule to another, the molecules sometimes formed new molecules or new chemicals. Dr. Toby's experiments showed for the first time that some atoms or molecules can serve as bridges for this exchange of electrons. He also studied what happens to metals when they react with molecules such* as protein in the body's cells.

Notes

* :连读

1: white dwarf star——白矮星

Self-taught training

Listen to Lesson 1 without looking at its literal form and then——

1. Decide whether the following statements are *true* or *false*.

1) Two persons won this year's Noble Prize for physics. ()

2) The winner of this year's Noble Prize for chemistry was born in the U. S. ()

3) Small stars will someday become extremely dense object. ... ()

2. Answer the following question.

What are being created, as Dr. Fowler showed, when a giant star explodes?

Lesson 2

THE INTERNATIONAL YEAR OF THE FOREST

The United Nation's Food and Agriculture Organization has declared 1985 as the International Year of the Forest. It is leading a campaign to gain support for the protection and improvement of the world's forests. 4,300,000,000 hectares of the Earth's surface are covered by forests. This is about 30% of the Earth's land area. But many of these forests are being destroyed. People are cutting down trees for fuel, building materials, or to clear the land for farms. And in many of these countries, people are not replacing the trees they take from the land. Cleared land can not hold rain. The water rushes through empty fields, it does not sink into the ground where it is needed. Instead, the flowing water carries away valuable soil.

Five years ago, the FAO¹ began a * * special program to develop better use of forests in developing countries. Today, there are more than 120 projects in 69 different countries. Some of the projects help local farmers develop good ways to grow trees for fuel wood and charcoal. Others help farmers grow trees for sale to wood products companies. Some share ideas on how to use the same land for forests, crops and farm animals.

In Tunisia², new methods are being developed to grow trees in desert lands. This will help check flooding and provide the Nation with

new supplies of fuel wood. And small plants grown beneath the trees will provide food for animals.

By protecting and improving the world's forests, the FAO hopes to improve the economies of developing nations. Presently, these countries produce only 20% of the products made of wood. Half the wood harvested in developing countries is exported as raw materials to other countries to be made into wooden products. The FAO wants developing countries themselves to make products for their own use and for export. For example, paper factories could greatly reduce the need for a country to import costly paper. Small local sawmills could produce building materials for the people living nearby.

The World Bank, the UN Development Program, the Swedish International Development Authority, and other groups are supporting research and providing aid to help countries export more wood products.

Notes

1: FAO—Food and Agriculture Organization 的缩写

2: Tunisia—突尼斯 * : 连读 ** : 弱读

Self-taught training

Listen to Lesson 2 without looking at its literal form and then——

1. Decide whether the following statements are *true* or *false*.

1) More than 4,000,000,000 hectares of the earth's surface are covered by forests. ()

2) New methods of growing trees in Tunisia will help stop flooding and provide fuel supplies. ()

2. Answer questions.

1) Which year is known as The International Year of Forest?

2) What does the abbreviation FAO mean?

Lesson 3

GREENHOUSE EFFECT IN ATMOSPHERE

Some scientists who study the world's atmosphere say they are worried about signs of change. The scientists say earth's weather is changing more quickly and the changes will be more severe than they had thought earlier. One warned that if nothing is done to halt damage to the atmosphere, temperatures early in the next century could rise higher than at any time in the past 100,000 years. Experts have warned for many years that the earth would suffer sometime in the future from what is called a greenhouse effect. Carbon dioxide and other gases in the atmosphere act like a greenhouse, the glass building where plants can be grown in cold weather. The gases permit heat from the sun to reach the earth, but they block the heat from escaping back into space. Most experts thought the increasing amount of these gases in the atmosphere would begin to change our weather during the middle of the next century. But several scientists say the problems are developing sooner than expected. They said this is because other gases are joining carbon dioxide in the atmosphere to prevent heat from escaping the earth.

A scientist at America's Space Agency says the earth's average temperature rose a little more than one degree Celsius in the past 100 years. Most of this increase happened in the past 25 years as humans produce more and more of the harmful gases.

Temperatures have risen even more in areas close to the north and

south poles. Scientists fear that rising temperatures will change expected rainfall throughout the world and will destroy the most productive farmlands. They say the increased temperatures also will melt polar ice and lead to a rise* in sea levels that could flood coastal areas including major ocean ports.

Weather experts say there must be international action now to ban or reduce the use* of materials that produce the harmful gases. Or, as one scientist says, temperatures* on earth will rise within 500 to 1,000 years to a level that will destroy human life. Tomorrow we will tell about another atmospheric change that is worrying scientists—— The hole in the ozone layer over Antarctica.

Notes

* : 连读

* * : 弱读

Self-taught training

1. Decide whether the following statements are *true* or *false*.

- 1) Carbon dioxide in the atmosphere prevents the heat from escaping into space. ()
- 2) Temperatures on earth will someday rise to a level that will destroy human life. ()

2. Answer questions.

- 1) What does an American scientist say about the earth's temperature increase in the past 100 years?
- 2) In which parts on earth temperatures have risen more seriously?

Exercise 1

TEENAGE SCIENCE CONTEST IN 1989

While listening, fill in the blanks with the proper words or phrases you hear from the tape.

A high school 1 from the southern 2 of Arkansas has won first 3 in the 48th yearly Westinghouse Electric Company Teenage 4 Contest. The Contest 5 each year to honor student scientists in 6. It provides the 7 with money to help pay for a 8 education.

This year, 9 students entered the Contest. 10 year old Christopher Skinner from Little Rock, Arkansas won first prize for 11 on Number Theory. He received \$ 12. He says he will use the money to pay for his 13 at the University of Michigan.

The Westinghouse Electric Company began its Science Contest following 14. The Company wanted to support 15 students, who were interested 16 science. 99% of the winners have 17 to complete university studies in science, mathematics or 18. About 19 have completed higher educational programs, that is 20 times greater than the usual 21 of American high school students. 5 Westinghouse Contest winners 22 the Nobel Prizes for scientific research. One was Gland Seaborg, who now 23 judge the contest.

Mr. Seaborg believes the 24 science competition is 25 for both students and the 26. "We live 27 age of high technolo-

gy,"he says:"we 28 people who know mathematics and science."

Mr. Seaborg and the other judges 29 to the student scientists several times to learn how they 30 and 31 problems. The judges choose winners 32 for what they have done, 33 for what they can be 34 to do in the future.