

高等学校教材

ENGLISH



复旦大学 主编

理工科用
英语

第四册 (修订本)

上海译文出版社

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复 旦 大 学
上海科学技术大学 合 编

上海译文出版社

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修订本编写说明

教育部委托复旦大学(主编)、华东师范大学、中山大学、上海科学技术大学和上海师范学院合编的《英语》(理科用)出版后,得到各兄弟院校和广大读者的关心和热情支持。为了进一步提高教材质量并适应形势发展的要求,我们在广泛征求意见和认真分析总结的基础上,根据高等学校理工科公共外语教材编审委员会拟定的《高等学校理工科公共英语教学大纲》进行了修订。修订版适用于理工科各专业。

这次修订在起点不变、体系不变的前提下作了较大的变动。第四册由原来的十课增至十二课。课文安排作了大的变动,原有课文只保留了两篇,其余十篇都是新选的。课文在保证一定深度、适当增加阅读量的前提下,力求内容有趣,体裁多样,文字生动活泼。本册增加了一些语法项目,并对原有的语法内容作了一些补充。本册的练习加强了对阅读理解能力的训练,增加了综合性、复习性的练习,并注意采用国内外当前使用的一些行之有效的新形式。为了帮助学生记忆生词、辨别词义、区分词类和扩大词汇量,各课继续介绍一些构词法方面的基本知识。本册共出现单词1226个,其中课文中出现的687个单词要求全面掌握。本册供一学期使用,讲授72学时。

本册承复旦大学外文系外籍教师特丽萨·威尔逊(Teresa Wilson)协助校阅全部课文、阅读材料、补充读物和部分练习,特表谢意。

本册承清华大学陆慈(主审)、武汉大学万惠泽(主审)、山东大学张来修、云南大学张源、南京大学赵启秀、四川大学于立本等六位同志审稿,特此致谢。

本册初版由复旦大学丰华瞻、王沂清、周惠麟、华东师范大学徐小鲁、中山大学顾敏渊、上海科学技术大学沈子文、毛雪华和上海师范学院胡瑞璋编写。

由于我们水平有限,这次修订的教材中缺点和错误在所难免,热诚希望读者批评指正。

编 者
一九八二年十一月

初 版 编 写 说 明

一、本书是根据教育部于 1977 年 10 月在上海嘉定召开的理科教材编写会议上所拟定的大纲编写的。

二、本书以马克思主义、列宁主义、毛泽东思想为指导，努力用辩证唯物主义观点阐明英语的基本规律，力求使教材具有革命性、科学性，并能理论联系实际，由浅入深，循序渐进，便于自学。

三、本书着重于打好语言基础，提高实际运用英语的能力。通过听、说、读、写、译各种形式，练好语音、词汇和语法的基本功，为培养学生具有阅读本专业英语书刊的能力打下扎实的基础。本书适用于理科各专业。

四、本书试用增多课数、缩短课文长度和分散语法难点的方法编写。全书分四册，每册讲授 50 学时左右，供一学期使用。第四册共有 10 课，其中第五课和第十课是复习课，不设语法项目。

五、本册课文全部选自新近出版的英美书刊，题材以科普文章为主，力求语言现代化，体裁多样化，文字生动活泼。

六、语法项目的选择和安排，是根据理科英语的特点，从教学实际需要出发，先易后难，分散出现。课文中新的语法现象，原则上与本课语法项目紧密配合，但为了使文章更加生动、自然，同时考虑到先有感性认识有利于教学，也适当安排了少量的超前语法。对超前语法，理解上没有困难的，一般不作注释；有困难的，主要从理解的角度进行注释。语法部分的例句，在译成汉语时，从教学效果考虑，译文尽可能接近原文结构。

七、本书尽可能地选用最常用的基本词汇。本册课文中出现生词 449 个，要求全部掌握。第一、二、三册课文以外出现的生

词，如在第四册出现，仍作生词处理。本册课文以外出现的生词，如在后面的课文中出现，也仍作生词处理。课文中出现的生词，以及阅读材料、补充读物、语法、练习、构词法和注释中出现的生词，全部列入总词汇表，以便查阅。单词根据丹尼尔·琼斯《英语正音词典》第十三版（1972年重印修订版）注音。单词有英、美两种拼法时，根据所选用的原文，决定用何种拼法。

八、练习的编选吸收了国外教科书的某些优点。练习项目力求多样化，机械性练习与综合性练习相结合，巩固本课所学内容与复习以往所学内容相结合。练习数量较多，可以全部使用，也可以挑选使用。

九、本册每课后面有一篇阅读材料。阅读材料比课文容易，其生词量为课文的三分之一至二分之一，供学生课外阅读。

十、本册后面编有十篇补充读物。补充读物既与课文内容适当配合，又可自成系统，一般比相应的课文稍难，主要供学生自学，必要时也可作课堂处理。

十一、由于形势发展很快，入学新生英语水平不断提高，我们在编写过程中力求使本书具有一定的机动性。每课的课文和语法是每个学生必须全面掌握的，其余部分可由教师根据学生实际情况灵活处理。

十二、本册由复旦大学外文系葛传槩教授校阅。

十三、本册承武汉大学（主审单位）、北京大学（主审单位）、山东大学、云南大学、南开大学、南京大学和厦门大学审稿，特向他们致谢。

十四、由于我们思想和业务水平有限，教材中一定存在不少缺点和错误，请同志们提出批评、建议，以便今后修订时改进。

编者

1979年7月

Contents

Lesson One	1
Text: He Led a Useful Life	
Grammar: The Subjunctive Mood (I)	
Reading Material: Britain	
Lesson Two	22
Text: The Fun They Had	
Grammar: The Participle (III)	
Reading Material: Atoms and You	
Lesson Three	39
Text: Modern Lighthouses	
Grammar: The Gerund (II)	
Reading Material: The Loss of 'Titanic'	
Lesson Four	55
Text: "Where Time Began"	
Grammar: The Subjunctive Mood (II)	
Reading Material: Our Planet's History	
Lesson Five	71
Text: The Long Chain of Evolution	
Grammar: The Preposition and Prepositional Phrases (II)	
Reading Material: The Theory of Evolution	
Lesson Six	91
Text: The Kraken Arrives	
Reading Material: Man the Menace	

Lesson Seven	110
Text: Alfred Nobel — A Man of Contrasts	
Grammar: Ellipsis	
Reading Material: Lincoln's Autobiography	
Lesson Eight	130
Text: A Creature of His Times	
Grammar: Inversion	
Reading Material: Setback for Zilchships	
Lesson Nine.....	151
Text: Simple Habits, Deep Thoughts	
Grammar: The Uses of "That"	
Reading Material: <i>Star Wars</i> — and Einstein	
Lesson Ten	174
Text: The Wasp and the Spider	
Grammar: The Uses of "It"	
Reading Material: They Seem Almost Human	
Lesson Eleven.....	194
Text: Are There Strangers in Space?	
Grammar: The Uses of "As"	
Reading Material: Other Worlds	
Lesson Twelve.....	215
Text: Physics and the Future (Epilogue to <i>Life Science Physics</i>)	
Reading Material: Preface to <i>Contemporary Physics</i>	
Supplementary Readings	234
1. Time Zones and the Date Line	
2. Travelling in the Jungle	
3. Danger — Keep Off!	

4. Digging up History
5. Introduction
6. New Wonder in Camaras
7. Michael Faraday
8. Atoms
9. Discovery by Accident
10. How Computers are Changing Our World
11. Arriving from Outer Space
12. How Scientists Solve Problems

Appendix.....269

1. Word Formation
2. A List of Common English and American English Words
3. Vocabulary



Lesson One

Text

He Led a Useful Life

Benjamin Franklin would seem right at home among us if he were alive today. In fact, he did a lot to shape our way of life. Right now you are probably nodding your head and thinking, "Oh, yes—we learned all about old B. F. in the fifth grade." But let's see whether you really know "all about him".

You probably know that he was a stout old fellow with a bald head who flew a kite with a key fastened to it and signed the Declaration of Independence. All that is true, but there is a lot more to know about this man who had so many useful ideas and served his country in so many different ways.

Franklin had a practical mind. When he saw a problem, he tried to do something about it. The houses of Philadelphia were built of wood and easily caught fire. Neighbors tried to help each other, but they could do little to save a burning house. So Franklin organized a fire-fighting company. Philadelphia's fire loss became so low that the first fire-insurance company in the United States was soon set up there. Ben Franklin was one of its directors. He also persuaded the city to pave and light its streets. Again, the fact that people had trouble keeping their houses warm in winter set Franklin's active mind to work. He decided that the big fireplaces were to blame. Because they were set deep into the wall, they did not let enough heat reach the middle of the room. So he drew some plans and hired an ironworker to make the potbellied Franklin stove. It stood in the middle of a room and threw off heat in every direction.

He did not patent the invention. He was too busy with his discoveries to bother with making money. Although he was a wealthy man by the time he was forty-two, money by itself did not interest him. He valued it because it enabled him to retire from business. Then he had time to spend on other things that seemed more worthwhile. What he really cared for most of all was science.

Franklin was always trying to answer the question: What makes things act the way they do? At that time learned men were puzzled about electricity. They wondered whether it was in some way like the lightning in a thunderstorm. It might be, but how could you prove it? You know how Ben Franklin proved it — by coaxing some electricity down his kite

string. That act made him famous in America and Europe. But of course Franklin did not stop there. He found a way to make the knowledge useful: he invented the lightning rod.

Franklin would gladly have spent the rest of his days in quiet study and research. But he was a very important person now, and the country needed him for public service.

Disagreement between the colonies and the British was becoming quite serious. Pennsylvania needed a representative in England. Would Dr Franklin accept the post? He would. He went to London and stayed there for more than ten years. He did his best and may have helped to delay the war. But both sides were too angry to reach agreement. Franklin returned home just as the Revolutionary War began, arriving in time to sign the Declaration of Independence.

He was now seventy years old, and his health was not good. He would gladly have settled down at home. But America needed help from France to carry on the war, and she asked Dr Franklin to win this help. He answered, "I am like a worn-out piece of carpet. If there is one corner left which can be useful to my country, I will be honored." Soon after, he set sail for France. There he succeeded in persuading King Louis of France to declare war on England. That was an important achievement.

Benjamin Franklin returned to America. He was very old now, and in poor health. But still he did not settle down and retire to his comfortable home. He sat through the long arguments on the terms of the Constitution. Twice, the meetings would have failed if he had not helped the delegates to agree.

Ben Franklin died in 1790 at the age of eighty-four. He had spent all his adult life helping people. Years before, he had told his mother that that was his aim. When he died he did not want people to say, "He died a rich man." All he hoped was that people would remember him and say, "He led a useful life."

New Words

- | | |
|--|-------------------|
| 1. shape [ʃeɪp] <i>vt.</i> | 使成形; 形成 |
| <i>n.</i> | 形状; 样子 |
| 2. nod [nɒd] <i>vt.</i> | 点(头); 点头表示 |
| 3. grade [ɡreɪd] <i>n.</i> | 等级; 阶段; (中、小学的)年级 |
| 4. stout [staʊt] <i>a.</i> | 结实的; 强壮的; 矮胖的 |
| 5. fellow ['feləʊ] <i>n.</i> | 伙伴; 同事; 家伙 |
| 6. bald [bɔːld] <i>a.</i> | (头)秃的 |
| 7. kite [kaɪt] <i>n.</i> | 风筝 |
| 8. sign [saɪn] <i>vt.</i> | 签(名); 签字于(信、文件等) |
| <i>n.</i> | 符号; 记号; 标记; 迹象 |
| 9. declaration [ˌdeklə'reɪʃən] <i>n.</i> | 宣布; 宣告; 宣言 |
| 10. independence [ˌɪndɪ'pendəns] <i>n.</i> | 独立; 自主; 自立 |
| 11. loss [lɒs] <i>n.</i> | 丧失; 伤亡; 损失 |
| 12. insurance [ɪn'ʃʊərəns] <i>n.</i> | 安全保障; 保险 |
| insurance company | 保险公司 |
| 13. director [dɪ'rektə] <i>n.</i> | 指导者; 董事 |
| 14. persuade [pə(:)'sweɪd] <i>vt.</i> | 说服; 劝服 |
| 15. pave [peɪv] <i>vt.</i> | 铺、筑(路等) |
| 16. fireplace ['faɪəpleɪs] <i>n.</i> | 壁炉 |
| 17. blame [bleɪm] <i>vt.</i> | 责备; 找……的差错 |
| 18. hire ['haɪə] <i>vt.</i> | 租; 雇 |
| 19. ironworker ['aɪən,wɜːkə] <i>n.</i> | 钢铁工人; 铁器工人 |
| 20. potbellied ['pɒt,belɪd] <i>a.</i> | 大肚皮的 |
| 21. stove [stəʊv] <i>n.</i> | 火炉 |

22. patent ['peɪtənt] <i>vt.</i>	给予……专利权；取得……的专利权
<i>n.</i>	专利；专利权；特权
23. bother ['bɒðə] <i>vt.</i>	烦扰；麻烦；操心
24. wealthy ['welθi] <i>a.</i>	富的，富裕的
25. enable [i'neɪbl] <i>vt.</i>	使能够，使实现
26. retire [ri'taɪə] <i>vt.</i>	退下；离开；退休
27. worthwhile ['wɜ:θ'wail] <i>a.</i>	值得花时间(或精力)的
28. care [keə] <i>vi.</i>	关心；关怀；想望
29. lightning ['laɪtnɪŋ] <i>n.</i>	闪电
30. thunderstorm ['θʌndə-stɔ:m] <i>n.</i>	暴风雨
31. prove [pru:v] <i>vt.</i>	证明
32. coax [kəʊks] <i>vt.</i>	用好话劝；诱(出)
33. string [strɪŋ] <i>n.</i>	线；带子
34. rod [rɒd] <i>n.</i>	杆，棒
lightning rod	避雷针
35. public ['pʌblɪk] <i>a.</i>	公(有)的；公众的；社会的
36. service ['sɜ:vɪs] <i>n.</i>	服务；贡献
public service	公益服务；公职
37. disagreement [ˌdɪsə'gri:mənt] <i>n.</i>	意见不同；争执
38. colony ['kɒləni] <i>n.</i>	殖民地
39. British ['brɪtɪʃ] <i>a.</i>	英国的；英国人的
<i>n.</i>	英国人
40. serious ['sɪəriəs] <i>a.</i>	认真的；须认真对待的；严重的
41. representative [ˌreprɪ'zentətɪv] <i>n.</i>	典型；代理人，代表
42. delay [di'lei] <i>vt.</i>	耽搁；推迟
43. angry ['æŋɡri] <i>a.</i>	发怒的，愤怒的
44. agreement [ə'ɡri:mənt] <i>n.</i>	同意，一致；协议
45. revolutionary [ˌrevə'lʊ:ʃənəri] <i>a.</i>	革命的
46. settle ['setl] <i>vt.</i>	安排；使平静
<i>vi.</i>	停息；平定下来
47. worn-out ['wɔ:n'aut] <i>a.</i>	用坏的；穿破的；不能再用的
48. carpet ['kɑ:pɪt] <i>n.</i>	地毯
49. sail [seɪl] <i>n.</i>	帆
<i>vi.</i>	航行；启航

- | | |
|---|------------|
| 50. achievement [ə'tʃi:vmənt] <i>n.</i> | 成就; 成绩 |
| 51. argument ['ɑ:gjumənt] <i>n.</i> | 争论; 辩论 |
| 52. term [tə:m] <i>n.</i> | 学期; 术语; 条款 |
| 53. constitution [kənsti'tju:ʃən] <i>n.</i> | 建立; 任命; 宪法 |
| 54. delegate ['deligit] <i>n.</i> | 代表 |
| 55. adult ['ædʌlt] <i>a.</i> | 成年人的 |
| <i>n.</i> | 成年人 |

Proper Nouns

- | | |
|---|------------------------------------|
| 1. Benjamin Franklin
[ˈbendʒəminˈfræŋklin] | 本杰明·富兰克林(美国
政治家、科学家, 1706—1790) |
| 2. the Declaration of Independence | (美国)独立宣言 |
| 3. Philadelphia [ˌfiləˈdelfjə] | 费城(美国港市) |
| 4. Pennsylvania [ˌpensilˈveinjə] | 宾夕法尼亚(美国州名) |
| 5. King Louis [ˈlu(:)i] | 路易国王(法国路易十六世,
1754—1793) |
| 6. the Constitution | 美国宪法 |

Phrases and Expressions

- | | |
|---------------------------|---------------|
| 1. in fact | 其实, 实际上 |
| 2. right now | 即刻, 就在现时 |
| 3. be built of (或 out of) | 由……构成 |
| 4. catch fire | 着火 |
| 5. set up | 设立; 建立 |
| 6. be to blame | 该受责备; 应负责 |
| 7. throw off | 扔开; 发出 |
| 8. bother with (或 about) | 为……伤脑筋, 为……操心 |
| 9. by the time | 到……的时候 |
| 10. by itself | 单独地; 孤零地 |
| 11. at that time | 在那时 |
| 12. do one's best | 尽力 |
| 13. settle down | 定居; 过安定的生活 |

- | | |
|------------------|-----------------------------|
| 14. carry on | 继续开展; 进行下去 |
| 15. set sail for | 乘船去 |
| 16. succeed in | 在(某方面)成功 |
| 17. sit through | 一直; 到……结束; (虽无兴趣而强忍着)听完, 看完 |

Notes

1. Right now you are probably nodding your head and thinking, "Oh, yes —we learned all about old B. F. in the fifth grade."

此时此刻你可能就在点头表示同意并想, “噢, 对, 我们在五年级时就 知道老本杰明·富兰克林的所有事迹了。”

1) right now 作“正是现在”“现在立刻”解。

2) old B. F. 等于 old Benjamin Franklin. old 用在人的姓名前, 是一种表示亲切的称呼语。

2. Although he was a wealthy man by the time he was forty-two, money by itself did not interest him.

尽管他到四十二岁时已经是一个很富裕的人了, 然而金钱本身并不引起 他的任何兴趣。

这里的 by the time 当作一个连词用, 意为“到……的时候”, 引导 时间状语从句。

3. Pennsylvania needed a representative in England.

宾夕法尼亚需要有一名代表驻在英国。

富兰克林作为宾夕法尼亚州驻英代表的任务是争取十三个殖民地 (the colonies) 同英国之间达成和解。他在意识到无法取得和解、战争 不可避免后, 于一七七五年回到宾州。

4. Franklin returned home just as the Revolutionary War began, arriving in time to sign the Declaration of Independence.

就在独立战争开始时, 富兰克林回国了, 及时赶上签署独立宣言。

1) the Revolutionary War: 美国独立战争, 北美十三个殖民地人民推 翻英国殖民统治, 争取独立的革命战争。战争于一七七五年四月 十九日爆发, 一七八一年九月英军被迫媾和, 并于一七八三年签订《巴 黎和约》, 正式承认十三个殖民地脱离英国独立。从此, 美洲出现了 第一个资产阶级共和国。