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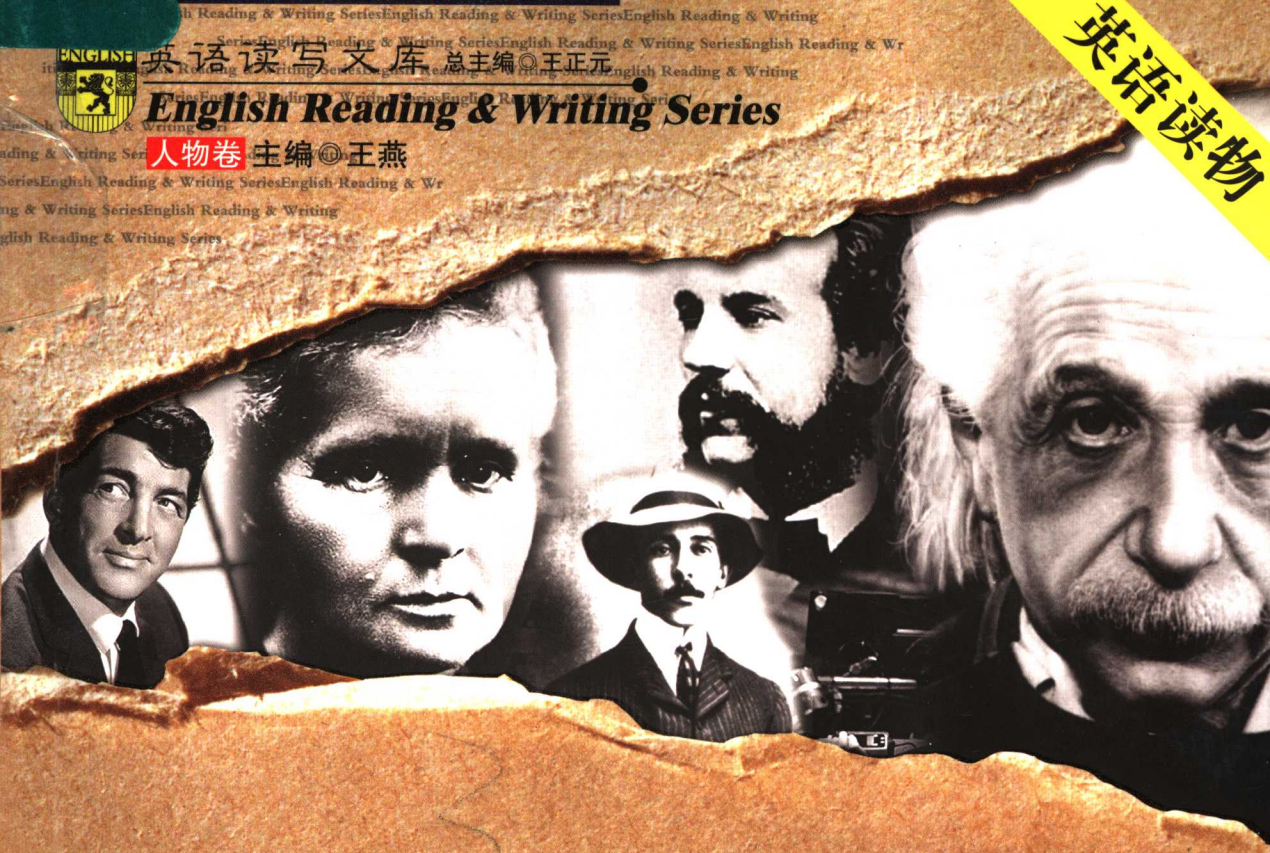

Stars in Science

科学之星

- Joseph Henry 辉煌的背后
- Michael Faraday 光明的使者
- Alfred Nobel 人生的最高勋章
- Stephen Hawking 宇宙与生命
- Jonas Salk 拯救人类的骑士

邱畅

机械工业出版社
CHINA MACHINE PRESS

Starsin

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本书共选编30余篇文章，分别介绍了代表不同领域的科学家的科学成就及人生经历。本书对文章中出现的难词、难句做了重点讲解，以使广大英语学习者轻松地完成阅读练习。在英语学习中，阅读与写作是并行不悖的两种能力。因此，书中的“读写指导”部分在辅助学习者阅读的同时，还特别融入了写作技巧的运用，并设置了相应的写作训练，意在使广大英语学习者的读写能力得到同步提高，从而使二者相互补充、相互促进。

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序言

经过十几所大学50余名英语教师的努力，这套“英语读写文库”终于同年轻的读者见面了。这套英语文库是套拓宽知识视野与提高英语读写能力的书，会给年轻的读者们带来英语学习的快乐。

英语读写对于英语能力的形成和发展十分重要，而且阅读和写作在英语测试中占有很大比例。学生如何通过英语自主学习提高英语能力，是学生和教师们关心的问题。因此我们在编写这套文库时，根据教学大纲对英文材料进行了精心筛选和改写，所选文章由浅入深，循序渐进，可读性强，并结合测试方式与技能要求编写了导读、词汇注释、写作指导与练习。这些对学生英语阅读与写作能力的提高都会有很大的帮助。

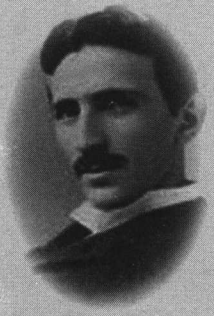
这套文库分为《人物卷》、《科学卷》、《文学卷》，选材广泛、内容丰富，可满足中学、大学生们的需要。这套文库会带领读者走进非洲的热带雨林、欧洲的迷人风光、文坛盛宴以及科学的殿堂；在阅读中走近科学家、文学家、军事家、艺术家、哲学家，会在英语阅读中打开智慧之窗，促使人变得聪明、自信和坚强。

在这套书出版之际，感谢出版社编辑们的辛勤劳动，感谢来自北京外国语大学、天津大学、辽宁大学、沈阳大学和燕山大学作者们的辛勤、认真的工作。

总主编 王正元

2006年10月

目录 CONTENTS



Unit 1

Michael Faraday
迈克尔·法拉第：光明的使者

导读

当我们打开电灯照亮黑暗时，便会想起爱迪生；当我们拨通电话与亲友互致问候时，便会想起贝尔。然而，我们可曾想起与这些电气化设施休戚相关的科学家——法拉第？如果法拉第没有成功地发现电磁感应现象，没有成功地创立现代电磁场的基本概念，今天的人类将仍然是黑暗中飘零的一叶孤舟。

Faraday was only nine years old when his father died. A year later he served as service boy, and then learned to become a **bookbinder**[1] in the bookshop. Little by little, he became interested in science, **particularly**[2] electricity. He began to attend **lectures**[3] by excellent scientists.

As his study came to an end, he sent the notes taken at a Davy lecture with a **letter of application**[4] to the great Davy. The notes were handsomely **bound**[5] in a book, with the title page beautifully pen-printed in **decorative lettering**[6]. How could Davy refuse such a young man when such work was paid to him?

---

1 bookbinder /ˈbukˌbaində/ *n.* 图书装订工
2 particularly /pəˈtikjuləli/ *adv.* 尤其是，特别是
3 lecture /ˈlektʃə/ *n.* 讲座
4 letter of application 申请书，自荐信
5 bound *v.* bind /baind/ 的过去分词
6 decorative lettering 艺术字，美术字

At the age of twenty-one, Faraday became an assistant in the lab of **the Royal Institution**[7], working with Davy. Though there was not much money, the youth was happy to get out of the bookbinder trade and to work in science.

He had long believed that, since an **electric current**[8] turns a bar of iron into a **bar of magnet**[9], a magnet should in some way produce an electric current. After many years of experiments and **research**[10], he was able to solve the problem in 1831.

Faraday moved a bar magnet within a **wire coil**[11] and made a little **compass needle**[12] swing. The swinging meant to him that the moving magnet had caused an electric current to **flow**[13] in the wire coil. He had also discovered the answer to a problem that had **puzzled**[14] great minds, which had a great meaning for **power plant**[15] today.

---

7 the Royal Institution 皇家学会
8 electric current 电流
9 bar of magnet 条形磁体，条形磁铁
10 research /rɪˈsəːtʃ/ *n.* 研究
11 wire coil 导线圈引起小罗盘上的指针摆动
12 compass needle 罗盘上的指针
13 flow /fləu/ *v.* 流动
14 puzzle /ˈpʌz(ə)l/ *vt.* 使……迷惑不解
15 power plant 发电厂

Reading Skills and Writing Guides

本篇文章以时间为线索，简洁明了地介绍了伟大科学家迈克尔·法拉第的一生。文章将他的成就分阶段展现给读者：童年阶段、少年阶段和青年阶段。作者较为详细地介绍了法拉第对电的研究经过及取得的成就。

我们在阅读记叙文时，应注意抓住表示时间脉络的状语，以便更准确地把握文章内容，理清文章脉络。在写作时要善于使用时间状语，这样会使文章脉络清楚。如：first，second，last，then，before，after，when，while。这些表达时间的词是写记叙文的有用的结构工具。在讲述一个故事或描述一个事件时，最便捷、最明了的方式便是以时间为顺序展开文章。

Multiple Choices

1. Michael Faraday can be described as _____.
   Ⓐ a bookbinder
   Ⓑ father of electricity
   Ⓒ an inventor
   Ⓓ a lab assistant

2. When Faraday was a boy, he _____.
   Ⓐ learned a lot from his father
   Ⓑ led a well-off life
   Ⓒ learned to bind books
   Ⓓ read many books in the public library

3. How did Michael Faraday get his job in the Royal Institution?
   Ⓐ By working as a good bookbinder.
   Ⓑ By making a little compass needle swing.
   Ⓒ By sending complete notes and application letter.
   Ⓓ By sending volumes and beautifully-decorated lettering.

4. In his experiment, Faraday discovered that _____.
   Ⓐ electric current can turn a magnetic into an iron bar
   Ⓑ the moving magnet can cause an electric current to flow in the wire coil
   Ⓒ an electric current can flow in a swinging compass needle
   Ⓓ a still magnet can produce an electric current

5. Which of the following can benefit from Michael Faraday's discovery?
   Ⓐ power plant
   Ⓑ chemical plant
   Ⓒ processing plant
   Ⓓ machine factory

Keys 1. B 2. C 3. C 4. B 5. A

Unit 2

Galileo Galilei

伽里列奥·伽利略：挑战上帝

导读

挑战上帝的意大利科学家伽利略利用自己发明的望远镜观测天空，发现了亚里士多德的错误。他以实际观察证明了地球不过是围绕太阳旋转的一颗行星。在当时蒙昧的社会中，伽利略微弱的呼声迅速被毫无理性的宗教狂潮所吞没。但是，真理的正确与否并不取决于人数的多寡。在崇尚科学的今天，伽利略这个名字已经与科学紧密地结合在一起了。

About 1586, Galileo began to study the movement of falling bodies. Almost all learned men still followed the belief of Aristotle that the weight of the body decided the speed of falling. In order to test Aristotle's theories, Galileo climbed to the top of the **Leaning Tower of Pisa**[1] and at the same time dropped two balls, one ten times heavier than the other. The two balls hit the ground in the same second. Yet Galileo did with what he had and his discoveries **marked**[2] the beginning of the science of **mechanics**[3] and **served as**[4] the basis for Newton's three laws of movement.

In 1609, he heard that a **magnifying tube**[5] had been invented.

---

1 Leaning Tower of Pisa 比萨斜塔，始建于1174年，为8层圆柱形建筑，塔高54.5米。
2 mark /mɑːk/ *v.* 标志
3 mechanics /miˈkæniks/ *n.* 机械
4 serve as 作为
5 magnifying tube 放大镜

Before six months had passed, Galileo had devised his own magnifying tube, one that had a magnifying power of thirty-two. He could turn it **in reverse**[6], to serve as a microscope, and he observed **insects**[7] in this way. He **made best use of**[8] it as a **telescope**[9]. By turning it on the sky, he began the age of telescopic astronomy. Using his telescope, Galileo threw away the basis of Aristotle's cosmos. Galileo found that the moon had mountains and the sun had **spots**[10], which showed that Aristotle was wrong in his theory, that is, heavens were perfect. However, his studies of the sun was bad for his eyes, which suffered from **infections**[11] in his youth, and in old age he went blind.

Galileo visited Rome in 1611, rather wrote a book **giving his views**[12] on the ***Bible***[13] and generally discussing **theological**[14] subjects. And Galileo was forced into silence in 1616. and forced to give up any views that **were opposed to**[15] the popular system. He had no choice but to give up his belief.

---

6 in reverse 倒转，逆转
7 insect /ˈinsekt/ *n.* 昆虫
8 make best use of 充分利用
9 telescope /ˈteliskəup/ *n.* 望远镜
10 spot /spɔt/ *n.* 点
11 infection /inˈfekʃən/ *n.* 感染
12 give one's view 发表观点
14 theological /θiəˈlɔdʒikəl/ *adj.* 神学的
15 be opposed to 反对……
13 *Bible* /ˈbaibl/《圣经》。《圣经》是基督教的一部经典，包括旧约和新约。虽然其中包括许多带有宗教迷信色彩的神话和传说，但是，由于基督教（包括天主教、东正教和新教三大教派）在世界上的广泛传播，它对西方各国的文学艺术和语言都曾产生过极大的影响，是一部极为重要的世界文学遗产。

Reading Skills and Writing Guides

文章以时间为顺序展开，简明扼要地叙述了科学家伽利略一生的成就。在本篇文章中，为了突出时间这条线索，每段的首句都含有时间状语或指示时间的结构。如：About 1586, Galieo began to...；In 1609, he heard that...；Galileo visited Rome in 1611,... 以上述表示时间的句子作为每段的首句，可以起到统领全段的作用，而且使文章脉络一目了然，也使读者的思路豁然开朗。

在阅读本篇文章时，应着重把握提示时间的句子，随着时间的发展理清文章的脉络；在写此类文章时，将某一过程分阶段进行叙述，并且在每个阶段之始提示时间。

Multiple Choices

1. What's Aristotle's idea about falling stones?
   Ⓐ Two falling stones, no matter how heavy they were, would hit the ground at the same time.
   Ⓑ The heavier stone would fall faster than the lighter one.
   Ⓒ The lighter would fall faster than the heavier one.
   Ⓓ The heavier stone would take the place of the lighter one.

2. Where did Galileo's first discovery take place?
   Ⓐ In the University of Pisa.　　Ⓑ Cathedral of Pisa.
   Ⓒ On the Tower of Pisa.　　Ⓓ At home.

3. What did Galileo discover about falling stones?
   Ⓐ The speed of falling was proportional to the weight of body.
   Ⓑ The speed of falling depended on the weight of body.
   Ⓒ The speed of falling had nothing to do with the weight of body.
   Ⓓ The weight of body had a great effect on the speed of falling.

4. What's the effect of Galileo's demonstration on science?
   Ⓐ The demonstration marked the beginning of mechanics.
   Ⓑ The demonstration created Newton's three laws of motion.
   Ⓒ The demonstration laid a good foundation for all branches of science.
   Ⓓ The demonstration made great progress in mechanics.

5. Old Galileo became blind, because _____.
   Ⓐ he suffered from a sudden infection
   Ⓑ he observed the sun too much
   Ⓒ he was born blind
   Ⓓ his eyes were damaged in an accident

Keys 1. B 2. B 3. C 4. A 5. B

Unit 3

Madame Curie

居里夫人：科学界的"第一人"

导读

居里夫人是20世纪最杰出的女科学家之一，她以多个"第一"著称：她是第一个为"放射"这一现象命名的人；她是欧洲第一位获得理学博士学位的女子；1903年她与丈夫因放射性的发现而同获诺贝尔物理奖，从而成为第一位荣获诺贝尔奖的女性；她还是第一位作学术报告的女性，第一位女教授，巴黎大学实验室第一位女主任，以及第一位连续两次获得诺贝尔奖的科学家。

On July 26th, 1895, the sun rose in a cloudless sky. Today was Marie's **wedding**[1] day. After marriage, Marie and Pierre moved to a larger flat. They only bought what was necessary. Marie started learning how to take care of her husband. On September 12th, 1897, their first daughter was born. Unfortunately, Pierre died in a car accident when their poor daughter was only nine.

A few days after Pierre's **funeral**[2], Marie **took the place of**[3] Pierre as the head of the lab, and the teacher in physics in Sorbonne.

1 wedding /ˈwedɪŋ/ *n.* 婚礼
2 funeral /ˈfjuːnərəl/ *n.* 葬礼
3 take the place of 代替……，替代……

After some months, she gave her first class. Besides students, her **audience**[4] included people from far and near. Marie started at the point where Pierre stopped. Everyone **was moved to tears**[5], while Marie said nothing but a clear class on physics. **Despite**[6] the second Nobel Prize and an invitation to the **conference**[7] with the world's leading physicists, 1911 became a dark year in Marie's life. In November, a matter of her private life and **relations**[8] with her **colleague**[9] Paul Langevin flooded in newspapers. Collecting all her strength, Marie **made** clear her **contributions**[10] in the scientific work with Pierre in her Nobel lecture.

In 1934 Marie died of **leukemia**[11], and was **buried**[12] the place where Pierre already lay. One of Marie Curie's **outstanding**[13] achievements was to have understood the need to gather **radioactive**[14] sources, not only for the **treatment**[15] of illness, but also to offer a lot of material for research in physics. Marie Curie left a great deal to the world. Her discovery of **radium**[16] saved and made millions of lives longer through the treatment of cancer, and her work led to discoveries about the **atom**[17] and the development of **nuclear**[18] power. Marie opened up a completely new field of research. Marie's work on radium is one of the most things on which the science of the modern world is set up.

4 audience /ˈɔːdiəns/ *n.* 观众
5 be moved to tears 感动得流泪
6 despite /disˈpait/ *prep.* 尽管
7 conference /ˈkɔnfərəns/ *n.* 会议
8 relation /riˈleiʃən/ *n.* 关系
9 colleague /ˈkɔliːg/ *n.* 同事
10 make contributions 做出贡献
11 leukemia /ljuːˈkiːmiə/ *n.* 白血病
12 bury /ˈberi/ *v.* 埋葬
13 outstanding /ˈautstændiŋ/ *adj.* 杰出的
14 radioactive /ˈreidiəuˈæktiv/ *adj.* 放射性的
15 treatment /ˈtriːtmənt/ *n.* 治疗
16 radium /ˈreidjəm/ *n.* （化学元素）镭
17 atom /ˈætəm/ *n.* 原子
18 nuclear /ˈnjuːkliə/ *adj.* 核的