

The background of the cover features a complex, abstract pattern of blue lines. These lines form a series of overlapping, curved shapes that resemble a stylized, elongated 'V' or a series of nested, flowing lines. The lines are of varying thickness and density, creating a sense of depth and movement. The overall effect is a modern, scientific, and artistic design.

Reading on Science for Teens



高考科普 英语阅读

■ 主编/高风平

世界图书出版公司

高考科普英语阅读

Reading on Science for Teens

主编 高凤平

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主 编 高凤平
责任编辑 刘学武
封面设计 范晓荣

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前言

FOREWORD

科普文章的题材分为一般科技类、生命科学类两部分，旨在为读者提供一个有针对性的选择阅读、欣赏科普英语原文的机会，从而扩大知识面，提高鉴赏能力。

1. 一般科技类文章的内容特点

科技类文章主要涉及信息技术、电子、通讯、航空、天文、军事、新技术和新发明等方面。本书所选文章从不同角度向读者介绍这类学科中新的观点、发明、各种现象及某些领域的研究发展动态，使读者在语言学习的同时，也能掌握一些相关的知识，把二者有机地结合起来。我们认为，丰富的背景知识有助于阅读理解，如果读者能通过此书的阅读扩大自己的知识面，那么对以后的阅读理解则会有一定的促进作用。正是出自于这样的目的，本书选材都出自于国外的各种原版杂志，既保证了内容的丰富多彩，又保证了语言的真实，而真实资料的使用也是语言学习的关键之一。学生可以借此体会到语言在真实交际情景中的使用情况，这同从专门为语言学习而编写的教科书不同，读者从中接触到的语言形式和语料都经过一定的加工，有一定的限制。在国内，读者很少有机会接触真实的语言交际场合及所学语言的社会和文化，而要获得此方面的知识，只有通过大量的阅读。阅读提供了让读者了解世界其它国家的历史、文化、社会现状及在文学艺术科学技术和经济各方面的发展，多样的题材、新颖丰富的内容，既可激发学生的阅读兴趣，又可促进语言学习的动力。此外，文章前面的内容简介，文章后面的词汇、短语注释，都便于读者脱离教师自己进行学习；而专业知识背景的注释，如学科或领域的奠基人、开拓者或做出杰出贡献的人物，不断出现的新科技，自然现象及重大科学发现和进展等的注释，都有助于拓宽读者的知识面。

2. 一般科技类文章的体裁特点

英语科技类文章多采取说明文的写作形式，其主要目的是说明某个领域的发展动态、现

状及取得的成果等，文中有时体现作者的态度及看法。说明文多以事实性的说明为主，而无华丽修饰的词藻。科技类的文章多采取描写解释及说明的形式，这与文章内容有关，因为说明文是直接传播知识的一种文体，它的内容必须有很强的科学性。科学性主要表现在两个方面：(1) 它所反映的应是客观事物的本质特征，真实面貌，而不是歪曲了的事实，或主观臆想；(2) 它的语言应准确无误，因此说明文中常避开含糊的词语。

说明文是科技专业人员最常用的一种文体，它解释或探讨某个自然现象的起因，介绍新技术和新发明或某个问题的解决方法。在说明解释过程中，作者多采用定义、分类、比较及对照、解释或分析因果关系等方法，为使说明更加清晰，文章又多使用细节及例子，使读者能顺利理解抽象的讨论；作者在展示事实及现象时，常根据主题的特征，采取时间顺序或合乎逻辑的方式，词语及句子力求准确、清晰，说明力求思想性、科学性、条理性、完整性及通俗性和趣味性。这类文章的语篇结构常包含如下几个方面：(1) 背景；(2) 问题；(3) 为解决问题而推荐使用的工具或必要条件；(4) 为达到预期的解决问题的效果，提供至少一个尝试性的程序建设；(5) 指出用什么手段来检测问题是否已解决；(6) 结束语。尽管说明文并不是必须包括所有这些因素，但其中的主要方面如问题、程序和解决方法都应涉及到。说明类文章有其表面结构线索，因它常基于某个暗含的逻辑结构，所以常以 *thus*, *because* 和 *since* 等词语把文章组织起来，一般是先给出证据，然后给出结论。

科技类文章中常穿插着空间顺序、时间顺序及逻辑顺序等。在阅读时，读者应注意以下几个因素：*what*, *why*, *how* 等。作者介绍的目的可能是为了说明事情的原由和过程，向读者传递信息。也就是说，说明文的目的在于对所写事物进行解释，从而给人以知识。

3. 一般科技类文章的练习特点

练习采取多项选择、简答题、判断对错题的形式，这样可满足学生需要进行大量练习的目的，便于检测速度和核对答案，与一些国内外主要考试的阅读理解形式基本一致，使本书可适合于考试前的集中准备，学生可以从答案及注解中快速评估出自己的阅读理解水平，发现理解中的不足之处，因为文章后的选择题可分为主题大意类、细节类、推理类、词汇类、文章结构、文体及作者的态度等几类，从所错的题项中，读者可看出自己哪方面较差，需要在练习中加以注意，找出自己做选项题的特点及做题的速度等，这些都有助于考试，又使学生在不知不觉中提高了阅读速度、解题技巧及这类文章的阅读理解水平。总之，阅读理解练习的最终目的是为了让学生在独立的语言学习中，对自己的阅读理解进行检查，因此，同扩大背景知识一样，都是围绕着提高阅读理解这一中心而设计的。

综上所述，同其它类的阅读理解一样，本书也是围绕着文章结构形式（体裁），题材（内

容) 类型及练习题类型这三方面来编排的。在阅读理解时, 应针对科技类型的文章作出不同的分析与理解。在科学领域中, 广泛使用的说明文可以说明客观事物的特点和性能, 介绍某种操作程序, 也可用于解释抽象概念, 阐明科学道理和自然现象。相应地我们应以此决定我们把握文章的方式, 从而找到问题的正确选项。多样的体裁, 丰富的题材及全面的理解练习体现出本书的独特性及价值。

编者

2006 年 2 月

The Vinegar

醋

Introduction

提到醋,人们都熟悉,但你可曾想过,人们生活中必不可少的醋是怎样发明的?除了做调味料,它是不是还有其他的功效呢?那么请看本文,它将会详细地回答您的疑问。

Say the English word “vinegar”, you are almost speaking French. “Vinegar” comes from French: “vin” is French for wine, and “aigre” means sour^①. That’s exactly what vinegar is: sour wine.

Historians say that about ten thousand years ago, someone’s wine was accidentally left standing too long and went sour. The result? Vinegar!

The basic formula for making vinegar is simple:

Step One: Yeast^② changes natural sugars to alcohol, in a process called fermentation^③. (Fruits, vegetables, or beer can be used to make the alcoholic liquid required for the first step in making vinegar) Step Two: Bacteria^④ acts on the alcohol, changing it to an acid. This process is called acid fermentation. The wine is simply exposed to air for a certain time.

We usually think of using vinegar in salad dressing^⑤ and pickles^⑥. But historian says vinegar has been used as a medicine for centuries. Through the centuries doctors recommended vinegar for skin disorders^⑦ and lung ailments^⑧, as an inhalant^⑨, and for sprains^⑩, fever and hemorrhages^⑪.

Roman soldiers put vinegar in their drinking water to purify it. Through history the most important use of vinegar has been as a food preservative. Refrigerators were invented less than 100 years ago, before that time, food was preserved by drying, salting or pickling, and the most important pickling solution was always vinegar.

Today many people still use vinegar to soothe sunburn, as a stain remover, household cleaner, weed killer and rust^⑫ cutter... and of course, as a cooking ingredient^⑬.

Notes

- | | |
|-----------------------------------|--------------------------|
| 1. sour <i>adj.</i> 酸的 | 2. yeast <i>n.</i> 酵母 |
| 3. fermentation <i>n.</i> 发酵 | 4. bacteria <i>n.</i> 细菌 |
| 5. salad dressing <i>n.</i> 色拉调味料 | 6. pickles <i>n.</i> 腌菜 |
| 7. disorder <i>n.</i> (身心机能)失调 | 8. ailment <i>n.</i> 疾病 |



9. inhalant *n.* 吸入药

10. sprain *n.* 扭伤

11. hemorrhage *n.* 大出血

12. rust *n.* 锈

13. ingredient *n.* 烹调的原料

Exercises

1. Which language does "vinegar" come from?

A. German

B. Spanish

C. French

D. Scottish

2. Which is not the usage of vinegar?

A. cooking ingredient

B. water purifier

C. food preservative

D. chemical material

3. Which can't be used to make the alcoholic liquid?

A. fruit

B. vegetable

C. beer

D. salt

4. The doctor uses the vinegar to ____.

A. cure the sprains

B. recommend the lung ailment

C. cure the skin disorder

D. All the above

5. The most important usage of vinegar is ____.

A. medicine

B. stain remover

C. weed killer

D. food preservative

Keys

1. C 2. D 3. D 4. D 5. D

Nature Balance

自然界的平衡

Introduction

人为社会立法,自然界也有它自身的法则,当人类强行介入时,自然界就会“动荡或不安”,甚至打破平衡。

Not many years ago, some American farmers began to complain about hawks^①. The hawks were

killing chickens. The farmers did not know what to do. They went to the government officials and asked for help.

The officials said, "We'll pay you for each hawk you kill. " The farmers began to kill the hawks. Many hawks were killed, but the farmers now had another problem. The field mice were growing in number, and they were eating up the farmers' corn.

Hawks eat not only chickens but also field mice. They eat more field mice than chickens.

But if the farmers had known that, they would not have upset^② the balance of nature.

In one part of the United States, there are deer which eat a kind of wild rose. The deer are eaten by mountain lions.

The number of deer, mountain lions, and wild roses does not change much if people stay away from them. If there are too many deer, mountain lions will increase rapidly in number and kill many deer. If there are too many mountain lions, there will be fewer deer and there will be more roses.

It is always necessary for us to keep the balance of nature. The government once killed almost all the mountain lions to protect the deer. Soon there were so many deer that they ate up all the wild roses. Then they began to eat the green leaves of young trees which were important to the farmers.

So the farmers protected their trees from the deer. The deer had nothing to eat, and many of them died.

The government learned a valuable lesson from nature.

Notes

1. hawk *n.* 鹰

2. upset *v.* 打乱, 不安

Exercises

1. Why did the American people kill the mountain lions? ____
 - A. Because people wanted to protect deer.
 - B. Because the mountain lions often attacked their houses.
 - C. Because there were too many mountain lions there.
 - D. Because people felt afraid of the mountain lions.
2. Which of the following statements is true? ____
 - A. After killing many hawks, farmers had no worry.
 - B. People killed the mountain lions because they didn't like this kind of animals.
 - C. Many deer died from lacking of food.
 - D. The government didn't learn anything from the nature.
3. What can we learn from the article? ____
 - A. We must keep the balance of nature.
 - B. We mustn't kill any animals.
 - C. We must feed the hawks with our corn to keep the balance of nature.



D. Both A and B. The farmers did not know what to do. They went to the officials and asked for help.

Keys

The officials said, "We'll pay you for each hawk you kill." The farmers began to kill hawks. Many hawks were killed, but the farmers now had another problem. They were eating up the farmers' corn.

1. A 2. C 3. A

The Jumping Mice

跳鼠

Introduction

你曾见过跳鼠吗？它的尾巴是否给你留下了很深的印象？

The body of a jumping mouse is from two to four inches long. The tail has a length of from five to six feet inches. Jumping mice usually leap^① at least five to six feet. Some of them can jump down from eight to ten feet through the air.

Forgetting their tails, we may say they can jump thirty to forty times the length of their bodies. To "forget" the tail is rather hard to do. The tail is needed if this mouse is to keep in balance while jumping.

When a jumping mouse is out off part of the tail, say two or three inches, this mouse finds things different. If it makes a leap, it turns head over knees at least once, sometimes two or three times. Jumping mice live in fields, grassland and some wooded parts of North America.

Other jumpers are found in the hare family. They ought to make better leaps than the jumping mice because of their much larger size.

Any hare leaps very well, but the jumping hares of southern and eastern Africa are far above other hares. When you think of the size and strength of their legs, you will feel no wonder why jumping hares are able to leap twenty feet or even more.

Notes

1. leap v. 跳跃

Exercises

1. Which of the following is true?

A. A jumping mouse's body is as long as its tail.

- B. A jumping mouse's body is longer than its tail.
 C. A jumping mouse's body is bigger than its tail.
 D. A jumping mouse's body is shorter than its tail.
2. We say that the jumping mouse can leap thirty to forty times the length of body when later.
 A. the mouses forgets its tail.
 B. We measure the whole body, including the tail.
 C. We just measure the body without its tail.
 D. We forget measuring its tail.
3. What's the use of tail of the jumping mouse?
 4. Why do jumpers in the hare family ought to make better leaps?

Keys

1. D 2. C
 3. The jumping mouse uses his tail to keep in balance while jumping.
 4. Became their bodies are stronger and larger in size.

The Dolphins

海豚

Introduction

海豚是一种惹人喜爱的动物,但至今为止,科学家们还不是完全懂得它们。不过,他们还是有了一些新的发现。

After a long period of studies, scientists are uncovering surprising new findings about dolphins^①. They believe that dolphins do "talk" to each other, whistling "names" among themselves and others in their group. They help one another when in trouble. Like bats, they use sound waves to "see". Because of these and many other findings, many scientists now place dolphins among the cleverest animals on earth.

Dolphins love to mimic^②. If we swim on our backs, they do too. If we dive, they follow. Once a trainer blew a puff^③ of cigarette smoke against the window of an observation tank^④, a young dolphin suddenly swam to its mother, nursed^⑤ a moment, and spit out a cloud of milk against the glass.

It is even more surprising that dolphins are able to understand sign language. One of Herman's



dolphins has mastered more than 50 sign words. And they can also mimic the signatures of others. Now scientists are learning how dolphins “speak” to each other.

Dolphins help one another. When birth-giving takes place, females^⑥ gather to keep off sharks^⑦. Later, while the mother looks for food, they care care of young dolphins, swimming in a circle.

Dolphins reach out to us in astonishing ways. What would the world be like without them?

Notes

- | | |
|---|---------------------------------|
| 1. dolphin <i>n.</i> 海豚 | 2. mimic <i>v.</i> 模仿 |
| 3. puff <i>v.</i> 一阵阵吹或喷, 一口口抽烟 <i>n.</i> 吹, (抽)一口烟 | |
| 4. observation <i>n.</i> 观察舱 | 5. nurse <i>v.</i> 给……喂奶; 吸……的奶 |
| 6. females <i>n.</i> 雌性动物 | 7. sharks <i>n.</i> 鲨鱼 |

Exercises

- What is the main idea of Paragraph 3?
A. Dolphins surprise us.
B. Dolphins are able to understand sign Language.
C. Dolphins can master more than 50 sign words
D. Dolphins can speak to each other.
- The word “they” in the fourth paragraph refers to
A. female dolphins B. dolphins C. sharks D. male dolphins
- Which of the following do you think is more reasonable?
A. We are still in the early stage of learning about these animals.
B. Sign Language is the only way to make dolphins understand us.
C. Man will be able to talk freely to dolphins in the near future.
D. We have little difficulty in understanding dolphins.
- Why the young dolphin suddenly nursed and spit out a cloud of milk against the glass?

Keys

- B 2. A 3. A
4. Because dolphins love to mimic. The young dolphin wanted to mimic the trainer who blew a puff of cigarette smoke.

The Weasels

黄鼠狼

Introduction

你听说过“黄鼠狼给鸡拜年——没安好心”这个歇后语吗？黄鼠狼究竟什么样子？它有什么生活习性？又是怎么寻觅食物的呢？本文将对这些问题一一解答。

The weasel is a small animal like a rat. Its body is long and thin and has reddish brown fur on top of its body and right beneath. It has a bushy tail and a lively face. Normally it hunts by night, seeking out frogs, mice, rats, small birds and chickens — even if its victim is several times its own size.

The weasel is a very active little animal and perhaps because of its thinness, appears to slide along the ground like a snake. Sometimes it leaps along on its short legs and may even pause to play around a bush. It will swim to catch a water rat or climb swiftly up a tree to steal eggs from the bird's nest.

Sometimes the weasel is unlucky in its hunting and is forced to try its luck during daytime. When this happens, it sometimes uses a strange method. It goes near a bush where it can hear birds singing. Then it dances about and wriggles its body from side to side. Like most wild creatures, birds are full of curiosity. Some of them come down on the ground and watch the weasel. A few brave ones get nearer and nearer to the weasel to have better look at this strange animal. After a while, one foolish bird gets too near, and the weasel immediately seizes it. When this happens, the victim is not necessarily eaten for lunch. The remaining birds often fly to its rescue. They fly down on the weasel, pecking it until it lets its victim fly and hurries away.

Notes

- | | |
|----------------------------|---------------------------------------|
| 1. weasel <i>n.</i> 黄鼠狼 | 2. reddish <i>adj.</i> 带红色的；微红色的 |
| 3. bushy <i>adj.</i> 浓密的 | 4. seek out 搜寻 |
| 5. victim <i>n.</i> 牺牲品，猎物 | 6. slide <i>v.</i> 滑，溜 |
| 7. wriggle <i>v.</i> 蠕动、扭动 | 8. rescue <i>n.</i> / <i>v.</i> 营救，救援 |
| 9. peck <i>v.</i> 啄 | |

Exercises

1. Why does the author mention "Chickens" in the first paragraph? _____



- A. They are bigger than weasels in size.
 - B. Weasels hunt them.
 - C. They like to watch a weasel dancing.
 - D. A weasel can dance to cheat them.
2. By normally it hunts by night, the author suggests that _____.
 - A. Weasels have the habit of hunting during the day.
 - B. Weasels choose not to hunt by day.
 - C. Weasels never hunt by day.
 - D. Night-time is not suitable for weasels to hunt.
 3. What can we get from the sentences "When this happens, the victim is not necessarily eaten for lunch. The remaining birds often fly to its rescue. "? _____.
 - A. It is the victim who eats the weasel for lunch.
 - B. The weasel takes its victim home to store it.
 - C. The weasel's trick is not always successful.
 - D. It would be unwise for us to trust a weasel.
 4. The main point of this passage is _____.
 - A. How weasels get their food.
 - B. A warning that nature has no mercy on foolish people.
 - C. A description of weasels, their way of life and the method they used to trick birds.
 - D. That weasels are not always lucky in their hunting.
 5. Which of the following sentences is correct?
 - A. A weasel is a rat.
 - B. The weasel's victim is always several times weasel's own size.
 - C. A weasel can climb swiftly up a tree.
 - D. When a weasel hunts, it usually dances about and wriggles its body from side to side to attract other creatures.

Keys

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

Notes

1. weasel n. 黄鼬
2. dusky adj. 深色的
3. victim n. 牺牲品
4. wriggle v. 蠕动
5. beck v. 召唤

Exercises

1. Why does the author mention "Chickens" in the first paragraph? ____

Today's Robots

当代机器人

Introduction

美国电影“星球大战”使 C3PO 和 R2D2 两个机器人非常出名。那么机器人的来源是什么呢？今天的机器人都在做什么呢？它们的将来又如何呢？

Robot. It is a word that seems so very modern. A word that creates a strong mental picture. A picture of something that looks and acts like a human. Robots are not human, of course. They are machines. We have a report on these machines and what they are doing.

Not long ago, the American “Star Wars” films made two robots very popular. The robots were called C3PO and R2D2.

C3PO moved and talked much as a human does. He looked like a strange metal man. But his computer brain made him much quicker at most mental activities than a human. R2D3 did not move or talk like a human. He was a short fat tube-shaped thing with a rounded top and flashing lights. Like C3PO, he had a very intelligent^① computer brain.

Human-like robots still are found only in movies and science fiction^② stories. Simple robots, however, are found in many places.

Robots are very much linked to our image of the future. The thought of what they may be able to do seems exciting. Yet the idea of robots also is a little frightening. Part of the fear comes from the way robots have been pictured in movies and science fiction stories.

The word “robot” is not as modern as you might think. It was used first in 1920 in a play by Czechoslovak^③ writer Karel Capek. The word robot comes from the Czech word for slave. In Capek's play, there were metal devices^④ that looked and acted like humans. They were designed to do all kinds of work to free humans from labor. Then the robots developed feelings. They killed the humans who made them.

The word robot, and robots themselves, are less than 100 years old. But humans have been dreaming of real and imaginary copies of themselves for thousands of years. Early peoples made little human statues out of clay. And they cut wood and stone to look like humans.

Perhaps they thought if they could make a copy that looked human enough, it might really come to life. Stories about creating human life continued for centuries. They usually involved the use of magic. At the same time, people were beginning to invent devices that did some jobs by themselves.



Such devices were called "automaton". The name came from Greek words meaning "acting by itself". Clocks run by water or by heavy weights, for example, were some of the earliest automatons.

What do today's robots do? Robots do work. Work that humans consider uninteresting or dangerous. Many robots are machines designed to do just one job. They are made to move and work by information put into their computers by humans. Robots used in industry are designed to copy the movements of the human arm. Simple robots pick up objects and place them in position. They cannot see. So parts and materials must be brought to them in the correct position.

What is the future of robots? The goal of scientists is to create a true human-like robot. Some experts have described this robot of the future as one that can act independently with the physical world through its own senses and actions. Humans have the ability to see, hear, speak and solve problems. Engineers have built robots that have one or two of these abilities. But it takes a number of big costly computers to make the robots work.

Simple robots will be used more and more. Many persons fear robots will replace human workers. Experts say this should not happen. They say robots can free human to do things robots cannot do. And they note that humans and robots are more effective as a team, than either working alone.

Notes

- | | |
|------------------------------|-------------------------|
| 1. intelligent <i>a.</i> 聪明的 | 2. fiction <i>n.</i> 小说 |
| 3. Czechoslovak 捷克斯洛伐克 | 4. device <i>n.</i> 装置 |

Exercises

- The word "robot" was used first in 1920 by _____.
A. Karel Capek B. American C. Czechoslovak writer D. Karel Cu
- Robot has a history of _____ years.
A. thousands of B. 100 C. hundreds of D. 200
- "Automaton" means _____.
A. slave B. acting by itself
C. work D. machine
- Today's robots do work that _____.
A. humans consider uninteresting or dangerous
B. telligent
C. intelligent
D. heavy
- True human-like robot _____.
A. have already be created. B. is just an imagination.
C. have be produced a lot. D. can be found in a few countries.

Keys

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

Travelling Rats

旅鼠

Introduction

世上的事千奇百怪，自然界中的动物有时也怪上一怪，比如文中所写的生活在斯堪的那维亚的老鼠们。

In the Scandinavian^① countries such as Norway and Sweden, there is a kind of rats called travelling rats, which produce their young seven or eight times a year. The young will grow up in about six months and produce their own young. So, in a few years these rats increase in great numbers. Usually they live together in holes in the depth of high mountains and live on grass and roots of trees. What is strange is that every three or four years, they will immigrate^② in thousands or even in millions, leaving a few of them in their original^③ living place.

The immigration mainly goes on at night. In the daytime, they eat and rest. At night, they go just straight forward, even if there is a river before them: the rats in the front will drown themselves while the ones after them will make their way on the bodies of the drowned rats. Sometimes the number of the moving rats may decrease because of illness, bad weather or attacks from eagles, wolves and so on. Once they reach the seaside, they keep on fearlessly and get drowned to the last one of them.

Why do they make such an immigration? Some suggest that there may be too many of them to find food. Some suggest that the immigration is the result of the bad temper^④ of the rats. But all these remain to be proved.

Notes

1. Scandinavian *n. / adj.* 斯堪的那维亚 2. immigrate *v.* 移居, 迁徙
3. original *adj.* 原先 4. temper *n.* 脾气

Exercises

1. Traveling rats feed on grass and roots of trees.
A. grass and roots of trees.