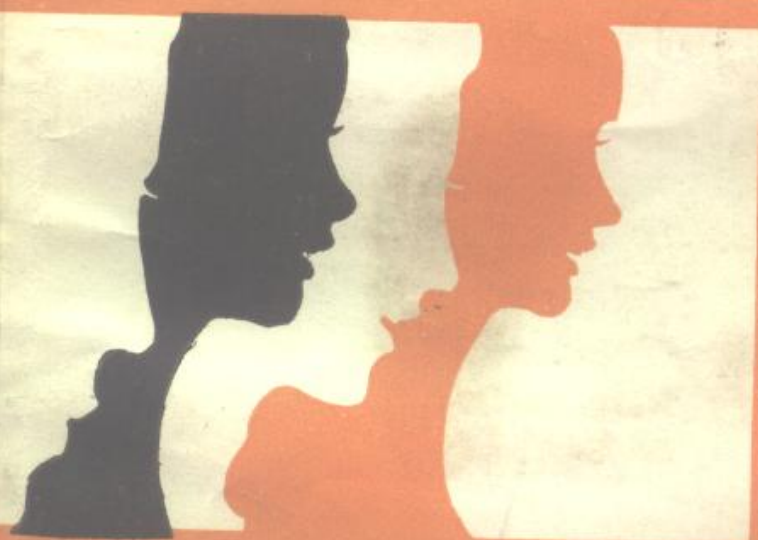


科技英语系列读物 EST Reading Series  
第二级 第一分册 GRADE II BOOK I

# Life in the Universe

(宇宙中的生命)



上海外语教育出版社

科技英语系列读物

第2级 第1分册

# Life in the Universe

宇宙中的生命

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2243/20

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上海外语教育出版社出版  
(上海西体育会路119号)

宜兴南漕印刷厂印刷  
新华书店上海发行所发行

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787×1092毫米 1/36 3 3/4印张 76千字  
1985年1月第1版 1985年1月第1次印刷  
印数: 1—35,500册

统一书号: 7218·133 定价: 0.50元

## 编写说明

为了开创公共外语教学的新局面，使理工科学生更快更好地掌握外语，机械工业部部属各院校，在机械工业部教育局的直接领导下，根据近年来教学的初步经验总结，经过调查研究，决定编写一套供全日制理工科大学及业余高等学校基础英语阶段使用的课外阅读教材。全书按照词汇量、语言结构和文体的难易分为四级，每级三个分册，共十二分册，分级编排，循序渐进。

本读物每册包括课文、注释、练习三部分：课文选自国外科普读物，选材原则强调思想性、科学性、知识性和趣味性；注释旨在帮助读者理解课文，掌握新的语言现象；练习力求多样化，以巩固所学的语言材料，提高英语实践能力。此外，每册之后附有词汇表，便于读者自学查阅。

本读物以培养学生阅读能力为主要目标。各分册根据选材内容，各有其书名；级与级之间，分册与分册之间，相互连贯呼应，成为一个系列，所以定名为《科技英语系列读物》。

本读物由机械工业部部属院校英语学科协作组统筹安排，组织部属院校分工负责选注，由马泰来、卢思源、李国瑞、柯秉衡、谢卓杰、戴炜华、戴鸣钟等同志（以姓氏笔划为序）组成的审编小组负责审订，陈开明同志担任审编小组秘书。总审为戴

鸣钟教授。由于编写时间仓促并受选材来源和编写水平的限制，全书未尽完善，希广大外语教学工作者和读者予以指正。

编 者

1983年5月

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## 1. Life in the Universe

One of the most exciting questions to which scientists are seeking an answer is, "Are there living things anywhere in the Universe? Is the Earth the only body in the whole enormous Universe where human beings or anything like human beings exist?"

First we must consider what goes to make a human being, ① whether plant or animal, and then what conditions living things need in order to go on living. Living things, like everything else, are made of atoms, and these atoms are grouped into molecules. A molecule is the very smallest bit you can have ② of any substance. When you break up a molecule of water, for example, you no longer have water at all, but only the atoms of which water is made—one atom of oxygen and two of hydrogen. The molecules of living things are made, not of two or three atoms, but of hundreds or thousands arranged in different, complicated patterns.

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(1) what goes to make a human being: 人是由什么构成的。

(2) you can have: 为定语从句, 修饰 bit, 从句前省略了关系代词 which.



If they become too hot, these complicated molecules of living things break up into their separate atoms and cease to be living.<sup>(3)</sup> Therefore there cannot be life on the Sun or any of the stars because they are far too hot, and there cannot be any life on a planet (which goes around the Sun) if it is too close to the Sun, as Mercury<sup>(4)</sup> is.

However, living things need energy to make them breathe, grow and move. Non-living things, like rocks and metals, do not need this. On Earth plants and animals get their energy from the light and heat of the Sun. Therefore planets that are very far from the Sun and extremely cold are not places where living things could exist.

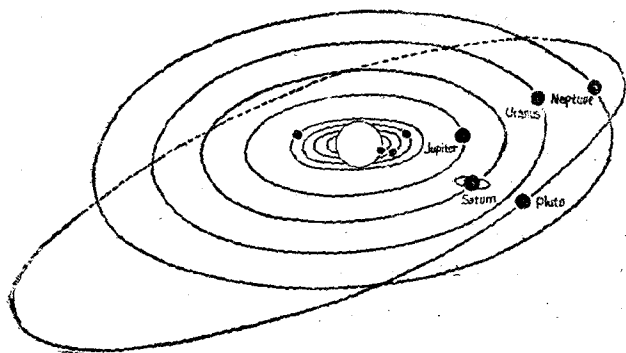
All the plants and animals that we know of<sup>(5)</sup> on Earth have to breathe, and so can live only on planets that have suitable atmospheres. Mars<sup>(6)</sup> and Venus<sup>(7)</sup> both have atmospheres, but neither is the sort that would support people or animals like those on Earth. The atmosphere of Mars is very thin and contains very little oxygen. That of Venus is made up of gases that we could not possibly breathe.

Mars can almost certainly support plant life,

---

(3) cease to be living: 终止生存。(4) Mercury ['mɜ:kjuri]: 水星。(5) that we know of: 我们所知道的。(6) Mars [mɑ:s]: 火星。(7) Venus ['vi:nəs]: 金星。

cease 停止



but that is all.<sup>(8)</sup> We know too little about Venus to be sure.<sup>(9)</sup> The remaining planets that move around the Sun are even less likely.<sup>(10)</sup> Mercury and Pluto<sup>(11)</sup> seem to have almost no atmosphere at all, and the giant planets, Jupiter,<sup>(12)</sup> Saturn,<sup>(13)</sup> Uranus<sup>(14)</sup> and Neptune,<sup>(15)</sup> are far too cold, as well as having atmospheres that we should find poisonous. It seems then, that there are no intelligent beings in our Solar System (the planets that go around our Sun), except on the Earth.

But if there are planets round the Sun, why should there not be planets around other stars?

---

(8) but that is all: 但仅此而已。 (9) We know ... to be sure! 我们对金星知道得太少,因而不能肯定金星上一定有植物。  
(10) The remaining ... less likely: 环绕太阳运转的其它行星上则更不大可能有植物。likely 之后省略了 to support plant life。  
(11) Pluto ['plu:təu]: 冥王星。 (12) Jupiter ['dʒu:pɪtə]: 木星。  
(13) Saturn ['sætən]: 土星。 (14) Uranus ['juərənəs]: 天王星。  
(15) Neptune ['neptʃu:n]: 海王星。

May not some of these be placed,<sup>⑥</sup> like the Earth, at just the right distance from their sun to have a suitable atmosphere and to be neither too hot nor too cold for life? Somewhere in space, millions and millions of miles away, there may be other creatures, with brains as well developed as ours who are also reaching out in space to discover what else exists in this wonderful Universe.<sup>⑦</sup>

## Exercises

### I. Answer the following questions.

1. When you break up the molecules of living things, can they still live?
2. Can there be life on the sun? State your reason.
3. What kind of atmosphere does Mars have?
4. How many planets are there in the solar system?
5. What are living things made of?

### II. Use the following words to finish the sentences.

molecule oxygen planet seek universe

1. The \_\_\_\_\_ is the name given to the entire celestial cosmos.
2. A \_\_\_\_\_ is a heavenly body that moves around the sun.

---

(16) May not some of these be placed: 在非正式书面语的否定句中, not 常放在主语之前。 (17) ... who are ... this wonderful Universe: ... 他们也正在向太空扩展, 以发现在这个奇妙的宇宙中, 还存在着什么别的东西。这里 who 引起的定语从句用来修饰先行词 creatures。

3. Hydrogen and \_\_\_\_\_ are both gases. What do you know about them? We need \_\_\_\_\_ to breathe.
4. To \_\_\_\_\_ means to look for. We do not use "for" after "seek".
5. The smallest unit into which a substance can be divided without losing its chemical property is a \_\_\_\_\_.

## 2. Killing Pain (I)

No one is very glad to hear that his body has to be cut open by a surgeon and part of it taken out. Today, however, we need not worry about feeling pain during the operation. The sick person falls into a kind of sleep, and when he awakes, the operation is finished. But these happy conditions are fairly new. It is not many years since a man who had to have an operation felt all its pain.<sup>①</sup>

Long ago, men knew of a few of things that



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(1) It is not ... all its pain: 不多几年以前, 一个不得不接受手术的人会感觉到手术给他的种种疼痛。

could cause a kind of sleep, but these anaesthetics were weak. They could not be given in large amounts because they often caused death. If only a little were given, the sick man could still feel. Therefore these old anaesthetics were almost useless.

Operations had usually to be done while the sick man could feel everything. Many young men who had decided to be doctors changed their minds after seeing their first operation. The sick man had to be held down on a table by force while the doctors did their best for him.<sup>②</sup> He could feel all the agony if his leg or arm was being amputated, and his fearful cries filled the room and the hearts of those who watched. Young men who could not bear these terrible sights and cries decided that they would have to spend their lives in other ways, and not be doctors.<sup>③</sup>

Sometimes the sick man was struck hard on the head before an operation. Then the doctors had to work as quickly as possible, to do what they could while he was still unconscious. Sometimes some of the blood was allowed to run out of his

---

(2) The sick man ... for him: 当医生尽最大努力为病人施手术时, 必得用强力把病人按在手术台上才行。 (3) and not be doctors: 因为前面的宾语从句中有 would, 所以这里的 not 前省去 would。

body to make him weak and unable to feel much pain. But a man who has to bear an operation ought to be as strong as possible. If a man loses a lot of blood today, more blood is usually put into his body before an operation, to make him stronger.

Any operation in those bad old days<sup>④</sup> was itself very difficult. The doctor had to work with the terrible cries of the sick man ringing through his head. The body moved nearly all the time because of the agony. Then legs and arms jumped from one place to another. The body tried to turn from side to side<sup>⑤</sup> as it was cut open. How could any operation be done carefully and quickly in conditions like these? When we remember also that the open cuts<sup>⑥</sup> were not kept clean, as they should have been, and that even the doctor's clothes were usually very dirty, we are not surprised to hear of large numbers of deaths. One doctor in Napoleon's<sup>⑦</sup> army saved only three lives in a thousand operations.

Soon after 1770, Joseph Priestley<sup>⑧</sup> discover-

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(4) in those bad old days: 在过去医学落后的年代。 (5) turn from side to side: 左右翻动。 (6) open cuts: 切口, 刀口。 (7) Napoleon [nə'pəʊljən]: 拿破崙一世(1769-1821), 法国皇帝(1804-1815)。 (8) Joseph Priestley ['dʒəʊzɪf 'prɪstli]: 约瑟夫·普里斯特利(1733-1804), 英国牧师、化学家, 1774年发现氧气。

ed a gas which is now called "laughing gas". Laughing gas became known in America, where young men and women went to parties to try it. Most of them spent their time laughing, but one man at a party, Horace Wells,<sup>⑨</sup> noticed that people did not seem to feel pain when they were under the influence of this gas. He decided to try an experiment on himself. He asked a friend to help him.

Wells took some of the gas, and his friend pulled out one of Wells' teeth. Wells felt no pain at all. He had lost a perfectly good tooth, but he was delighted. Now no one need feel pain when having a tooth out.<sup>⑩</sup>

In 1845 Wells demonstrated this way of pulling out teeth to some teachers and students, but he did not know enough about laughing gas, and he gave less than he should have. The man whose tooth was being pulled out cried out with the pain, and the teachers and students went away thinking that the gas was useless. Wells tried again, but this time he gave too much of the gas, and the man died. Wells never forgot this terrible event.

(to be continued)

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(9) Horace Wells ['horəs welz]: 霍勒斯·韦尔斯, 医生。

(10) have a tooth out: 拔掉一个牙齿。



## Exercises

### I. Answer the following questions.

1. Did a sick person who had to have an operation feel all its pain before the discovery of anaesthetics?
2. Why were old anaesthetics unsatisfactory?
3. Why was blood at one time taken away from a patient before an operation?
4. How many lives did one doctor in Napoleon's army save in a thousand operations?
5. There was one important thing about the use of laughing gas that Horace Wells did not understand. What was it?

### II. Choose the best answer.

1. Old anaesthetics were almost useless because they \_\_\_\_\_.
  - a. were too expensive
  - b. were painful
  - c. were too strong
  - d. were too weak
2. Watching operations without anaesthetics \_\_\_\_\_.
  - a. made young men decide to become doctors
  - b. made some of those watching cry
  - c. made many young men change their minds about becoming doctors
  - d. made many people interested in operation
3. Before the discovery of anaesthetics a patient being operated on \_\_\_\_\_.
  - a. had all the blood drained from his body