英语

第二册

（高等学校理科一年级第二学期用）

陈建耕主编

上海教育出版社

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再版說明

本书出版以来，承各兄弟院校提出许多宝贵意见，谨在此表示感谢．现根据这些意见，对本书作如下的修改：精读课文调换了三篇——第三、五、六课，约增加 2,000 印刷符号，独立阅读课文调换了一篇，约增加 1,000 印刷符号，共增加单词 23 个．补充阅读课文调换了二篇．语法和练习例句也都有较大的改动．

本书由周芳、杨永蓄、黄次栋、徐小鲁四同志参加修改．

编　者

1963 年 12 月

序　言

一、本书由华东师范大学、复旦大学、上海师范学院三校合作编写.

二、本书衔接高等学校理科英语第一册，供一年级第二学期使用，共51学时学完.

三、本书包括精读课文八篇，约21,000印刷符号，单词314个；独立阅读课文五篇，每课安排课内辅导时数约1学时. 教师可按学生实际情况灵活安排.

四、本书附有补充课文五篇，供程度较好的同学课外阅读之用.

五、本书每课精读课文后安排一个或两个语法内容. 书后附简明语法复习大纲.

六、为了帮助同学预习课文，本书对课文中新出现的或较难的语言现象，适当进行注释，难句并附汉译.

七、本书前六课附有语音练习，帮助同学正音、记忆单词和培养朗读能力. 书后附简明语音参考资料，仅供教师和同学参考.

八、本书练习分课内、课外两种，培养同学熟练技巧，提高运用能力；第四课和第八课后有阶段复习练习，教师可根据需要选用.

九、为了帮助同学更自觉地掌握词汇，本书在两次阶段复习前，按照课文出现的单词，简单介绍最常见的各种前缀和合成法，并附练习.

十、本书承陆殿扬、张祖培、缪廷辅、吴遐龄四位同志审校，谨在此表示衷心的感谢.

十一、由于编选时间匆促，编者业务水平和教学经验有限，本书一定存在许多缺点和错误，请使用本书的同志提出宝贵的意见，以便修改和提高. 来信请寄上海市华东师范大学外语系.

编　者　　1962年8月

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LESSON ONE

Some Forms of Energy

You have seen chemical energy at work many times, but of course you did not think of it as energy because you did not know what energy is. But now you know that energy is what makes things happen to materials. With that idea in mind, think for a moment about the energy that is released when materials change.

When you light a fire-cracker, there is a quick sputter as the fuse burns, followed by a terrific bang. The tough paper of the fire-cracker flies high up into the air. Surely there is energy in the powder in the fire-cracker, but a chemical change has to take place before the energy can be let loose. The chemical change takes place when the powder burns. Coal, too, contains chemical energy. When coal combines with oxygen in a fire (a chemical change), the chemical energy is released and does many useful things for us. We release chemical energy from gasoline to run our automobiles, trucks, and tractors. Our bodies move and keep themselves warm by using the chemical energy of food.

Thus you see that chemical energy is so important that we cannot live without it. Chemical energy is a kind of stored energy. It is sometimes called chemical potential energy. It cannot be used unless there is a chemical change in the material in which it is stored.

Light must be a kind of energy because it can make things happen to matter. Probably you have used light energy in a way that is very interesting to you. Have you ever taken pictures with a camera? When you did this, light energy changed the film to give you the picture.

Light is different from the other kinds of energy because it can leave the material from which it comes, shoot through empty space or through air, and cause changes in things a short distance away or millions of miles away. For example, the light of the sun shoots across more than ninety million miles of space to the earth where it helps us see, provides the energy to make food in green plants, and does many other things. Light from a lamp or a fire travels to objects many feet or even many miles away.

There are other kinds of energy that act like light, but we cannot see them. Probably you have already heard of some of these varieties of invisible energy. Radio waves, X-rays, and ultra-violet rays are kinds of energy. Scientists have a special name for all the energy that acts like light by shooting out in straight lines or radiating through space. They call it radiant energy. Light is just one variety of radiant energy.

New Words

chemical	['kemikəl]	*a.*	化学的，化学上的
release	[ri'li:s]	*v.t.*	放出，释出
light	[lait]	*v.t.*	点燃
		n.	光

fire-cracker	['faiə'krækə]	*n.*	爆竹
sputter	['spʌtə]	*n.*	喷，射
fuse	[fju:z]	*n.*	引线，导线
burn	[bə:n]	*v.i.*	燃烧
terrific	[tə'rifik]	*a.*	可怕的，猛烈的
bang	[bæŋ]	*n.*	砰的一声
tough	[tʌf]	*a.*	坚韧的
surely	['ʃuəli]	*adv.*	的确
let	[let]	*v.t.*	让，使；放，泄
loose	[lu:s]	*a.*	散开的；松的
gasoline	['gæsəli:n]	*n.*	汽油
run	[rʌn]	*v.t.*	开动；管理
automobile	['ɔ:təməbi:l]	*n.*	汽车
truck	[trʌk]	*n.*	卡车，货车
store	[stɔ:]	*v.t.*	贮藏
potential	[pə'tenʃəl]	*a.*	位的，势的；潜在的
unless	[ʌn'les]	*conj.*	除非
interesting	['intristiŋ]	*a.*	有趣的
camera	['kæmərə]	*n.*	照相机
film	[film]	*n.*	胶片；薄膜
cause	[kɔ:z]	*v.t.*	引起，使发生
mile	[mail]	*n.*	英里
ninety	['nainti]	*num.*	九十
lamp	[læmp]	*n.*	灯
variety	[və'raiəti]	*n.*	种类；多样性
invisible	[in'vizəbl]	*a.*	看不见的
radio	['reidiou]	*n.*	无线电

wave	[weiv]	*n.*	波
ray	[rei]	*n.*	射线
ultra-violet rays	['ʌltrə 'vaiəlit reiz]	*n.*	紫外线
special	['speʃəl]	*a.*	特别的
straight	['streit]	*a.*	直的
radiate	['reidieit]	*v.i.*	辐射
radiant	['reidjənt]	*a.*	辐射的

Irregular Verbs

Present	Past	Past Participle	Present Participle	
burn	burned burnt	burned burnt	burning	燃烧
let	let	let	letting	让,使;放,泄

Expressions and Phrases

1. at work 作功,在起作用
2. with that idea in mind 脑子里有了这种想法
3. to think for a moment 想一下,考虑一下
4. to take place 发生
5. to let loose 放出,释放
6. in . . . way 以…方式

Notes

1. But now you know **that** energy is **what** makes things happen to materials.

   译作：而现在你们知道能是一种使物质发生变化的东西. that 引导一个宾语从句，这个宾语从句本身又是一个主从复合句，包含表语从句 what makes things happen to

materials, 其中 things 和 happen to materials 构成复合宾语.

2. . . . there is a quick sputter **as** the fuse burns.
这里 as 是引导时间状语从句的连接词.

3. . . . but a chemical change **has to take place before** the energy can be let loose.
译作：但是必须发生一次化学变化，能量才能释出.
to have +动词不定式，表示"必须"，"必然要"之意.
before 此处表示必须先有前面主句的动作，而后才有后面从句的动作，相当于汉语的"然后"或"才".

4. Thus you see that chemical energy is **so** important **that** we cannot live without it.
so . . . that 是引导结果状语从句的从属连接词.
意为"如此…以致…".

5. It cannot be used **unless** there is a chemical change in the material **in which** it is stored.
译作：除非贮藏化学能的物质起化学变化，否则不能利用其化学能.
unless 是引导条件状语从句的连接词，等于 "if . . . not . . .".
in which 是带有介词的关系代词，引导定语从句，修饰其前述词 material.

6. Light **must be** a kind of energy.
这里 must 表示合理的推测，含有"一定"，"必然"之意.
must 表示推测时，只限于肯定句，不能用于否定句.

7. . . . and cause changes in things **a short distance away.**
这里短语 a short distance away 在句中作定语，修饰 things.

8. There are other kinds of energy that act **like** light.

这里 like 是介词，like light 这一介词短语，作方式状语，修饰 act.

Grammar

复合宾语和复合主语

The Complex Object and the Complex Subject

复合宾語 The Complex Object

在某些及物动词如 enable, want, think, find, consider, make, see, hear, help, call, name, leave, keep, prove, believe . . . 等后面，有时必须有一个复合宾语，才能使句子取得完整的意义. 复合宾语由两部分构成，第一部分一般用名词或代词；第二部分一般用动词不定式、分词、名词、动名词、形容词、介词短语，以补充说明第一部分所代表的人或物的行为，或说明其所处的状态、特性、身分等等. 第一部分和第二部分之间的关系，相当于主谓语之间的关系.

复合宾语主要有下面几种类型：

1. 名词(或代词)＋动词不定式

The education in China enables **the students to develop morally, intellectually and physically.**

中国的教育使学生在德、智、体几方面发展.

Our Party wants **us to become cultural, socialist-minded workers.**

我们的党要我们成为有社会主义觉悟的、有文化的劳动者.

注：在动詞 see, hear, make 等后，动詞不定式不带 "to". 例如：

We saw **him come.**

我們看見他来的.

Light can make **things happen to matter.**

光能使物質起变化.

在动詞 help 后，动詞不定式可加或不加 "to". 例如:

Will you help **me (to) do it?**

你願意帮助我做这件事么?

2. 名词(或代词)+分词

We find **the plants growing well.**

我们发现这些植物长得好.

We find **the door closed.**

我们发现门关着.

3. 名词(或代词)+名词

Sometimes we call **chemical energy chemical potential energy.**

我们有时称化学能为化学位能.

4. 名词(或代词)+动名词

We call **such a process accumulating materials.**

我们称这样的过程为积累资料.

5. 名词(或代词)+形容词

The students found **the book useful.**

学生们发现这本书有用.

6. 名词(或代词)+介词短语

We consider **the new method of great importance**

我们认为这个新方法是很重要的.

They always keep **the room in good order.**

他们经常保持房间整洁.

有时复合宾语的第一部分不是一个名词或代词，而是一个动词不定式、动名词或从句，这时通常用先行词 "it" 来代替，把这动词不定式、动名词或从句放到后面去. 能以这种结构作为宾语的动词，常见的有 think, find, consider, feel, make, take 等. 例如:

We feel **it** necessary **to solve problems** in a scientific manner.

我们感到有必要以科学态度来解决问题.

I think **it** impossible **learning a foreign language without practice.**

我认为学习外语而不实践是学不好的.

The teacher made **it** clear **that heat is a form of energy.**

教师把热是能的一种形式这一点讲清楚了.

复合主語 The Complex Subject

在某些动词如 see, call, regard, say, except, know, believe, suppose, report, consider, find 等的被动形式后面，有时可跟动词不定式、分词、名词、动名词、形容词、介词短语等来说明句中主语的行为或所处的状态，这一部分和主语一起构成复合主语，而两者的关系相当于主谓语的关系.

具有这种复合主语结构的句子类型，主要有下面几种:

1. 主语＋动词的被动语态＋动词不定式

The machine is reported **to be out of order.**

据报告说，机器坏了.

He is said **to know many languages.**

据说他懂得多种语言.

2. 主语＋动词的被动语态＋分词

He was seen **taking pictures with a new camera.**

人们看见他用一架新的照相机在拍照.

The laboratory is found **well equipped.**

人们发现这个实验室的设备很好.

3. 主语＋动词的被动语态＋名词

Chemical energy is sometimes called **chemical**

potential energy.

有时化学能叫做化学位能.

4. 主语＋动词的被动语态＋动名词

This step of work is called **testing a hypothesis.**

这个工作步骤叫做对假设进行检验.

5. 主语＋动词的被动语态＋形容词

The theory has been proved **correct.**

这理论证明是正确的.

6. 主语＋动词的被动语态＋介词短语

Radio waves, X-rays and ultra-violet rays are regarded **as radiant energy.**

无线电波、X光和紫外线都被认为是辐射能.

Classroom Exercises

I. Phonetic Exercise

Read the following, paying attention to sentence stress (句子重音), weak form (弱读形式), and shortened form (简写形式).

1. a pen and an apple
   [ə'pen ənd ən 'æpl]
2. the star and the moon
   [ðə 'stɑ: ənd ðə 'mu:n]
3. the east and the west
   [ði 'i:st ənd ðə 'west]
4. We love our people's commune.
   [wi 'lʌv auə 'pi:plz 'kɔmju:n.]
5. Coal contains chemical energy.
   [koul kən'teinz 'kemikəl 'enədʒi.]
6. We use light energy in various ways.
   [wi 'ju:z 'lait 'enədʒi in 'vɛəriəs 'weiz.]

7. He's tested these two kinds of elements.
[hiz 'testid ðiːz 'tuː 'kaindz əv 'elimənts.]

II. Exercises to the Text

A. Give the Chinese equivalents of:

1. form	2. chemical
3. material	4. idea
5. to release	6. to act
7. to light	8. to burn
9. to contain	10. to shoot

B. Give the English equivalents of:

1. 能	2. 想一下
3. 点燃	4. 光
5. 改变	6. 变化
7. 发生	8. 引起
9. 看不见的	10. 大概

C. Translate the following passage into Chinese:

One of the forms of energy is heat energy. Heat makes substances expand and can change water into steam. Another form of energy is electrical energy. You use it almost every day. The energy of electric current starts our automobiles, explodes the gasoline to make them run, operates our telephone, trolley bus, and so on. Probably most of the work done by machinery in the factories is done by electrical energy.

III. Grammar Exercise

Point out the complex object and the complex subject in the following sentences and tell how they