

ADVANCED ENGLISH VOCABULARY

WORKBOOK 3-B

UNITS 6—10

Helen Barnard

ADVANCED ENGLISH VOCABULARY
WORKBOOK 3-B (Units 6-10)

by Helen Barnard
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**Language Science
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INTRODUCTION

The students for whom this course is intended fall into three main categories:

- (a) Students in non-English speaking countries proceeding to non-English medium universities, who need the non-technical vocabulary which will enable them to read English textbooks and other material on their professional subjects (i.e. the physical sciences, mathematics, technology, and the social sciences*).
- (b) Students in non-English speaking countries preparing to take professional courses at English-medium universities at home or abroad.
- (c) Students of overseas origin in English speaking countries taking courses in English preparatory to entering universities or institutions in their host countries.

The students for whom the course was originally produced, and who for four years served as an experimental group for the development and revision of the course material, belong to the third category. They were Colombo Plan students from various countries taking a three months' intensive English course at the English Language Institute in Wellington, preparatory to entering New Zealand universities and technical colleges. Some of the course material has also been used by groups of students in the Wellington Polytechnic, Canterbury University (Christchurch), the University of the South Pacific (Suva), and by a group of Peace Corps teachers assigned to teach the English needed for science and mathematics in Fijian schools.

The needs of the three groups of learners listed above identify the purpose of the course. Its purpose is to teach the vocabulary which will enable these students to read English books and periodicals on their subjects and understand what they hear in lectures and seminars where English is used. It aims to teach this vocabulary not merely by introducing it into the course material but by explaining it and making the students thoroughly familiar with it.

The course consists of seven workbooks (each divided into sections) which can be covered in three months of intensive study, or spread out over a longer period. The workbooks are mainly self-instructional. A self-instructional course is essential for isolated students, and the workbooks are equally useful for pre-university

classes. Individual learning activities for large classes can only be provided by workbooks, in the absence of expensive equipment. Even in a situation where classes are smaller it has been found that a 'do-it-yourself' system produces better results, since it enables students to define their own objectives, programs a sequence through which they can attain them, and establishes the students as the navigators of their own progress.

The Basis of the Course

The course is based on a two thousand word vocabulary called the 'second thousand' and 'third thousand' word lists. A 'first thousand' word list of 1,000 content words, together with about 275 structural words and phrases, is assumed to be known in advance. The complete list will be published in the book *3,500 Word English* (Newbury House). Words taught in each book are indexed at the back.

The first thousand word list takes into account the results of a previous study (especially M. West's 'Minimum Adequate' and 'General Service' lists, Basic English, Riewald's lists, and H. Bongers' K list). The usefulness of each item was also checked, over a period of four years, by observation of overseas teachers at the English Language Institute (Wellington) who used the vocabulary for paraphrasing, speech-making, teaching and defining words not in the vocabulary.

The second and third thousand word lists were compiled on the basis of counts of non-technical vocabulary in university science and social science textbooks prescribed in Osmania University, Hyderabad, India, and in Victoria University, Wellington. The glossary of 'The Structure of Technical English' (A. J. Herbert, Longman) was also consulted, and a few high frequency words included from counts of issues of 'The New Scientist' and the Indian 'Statesman'. Technical words were excluded because these words form part of the subject-matter of professional disciplines, and are therefore best taught through these disciplines.

How to Use the Course

Each of the thirty sections of the course is divided into five subsections; (a) section vocabulary, (b) word study, (c) dictation exercises and dictations, (d) reading passages, (e) a short word-completion test on the section

vocabulary, which can be corrected by the students themselves.

The word study subsections include explanation and definition of words, explanatory diagrams and drawings, programmed learning passages, and exercises on the structure and syntax when words present such problems. Students can complete the word study tasks and exercises either on their own or under the supervision of a teacher. The dictation exercises and dictations require the aid of a speaker of good English or a tape-recorder. When students have worked through the word study and dictation subsections, they will have some familiarity with the section vocabulary. The reading passages can then be read without recourse to a dictionary or any other aid, and therefore offer the experience of an achievement. If the reading passages are studied in class they can be used as a basis for oral or written exercises and tests. Samples of such exercises and tests are given at the end of the first workbook. Finally, a short word-completion test (e) will help students to assess their familiarity with the vocabulary of the section.

Vocabulary is taught in the workbooks by cumulative techniques, i.e. by explanation followed by planned *repetition* of the words in a variety of typical contexts. The main condition for the attainment of the objectives of the course is therefore the careful completion of *all* the tasks and exercises it contains.

*For present purposes, 'the social sciences' include economics, political science, anthropology, sociology, psychology, and geography.

The Teacher's Guide to ADVANCED ENGLISH VOCABULARY

A complimentary copy of the Teacher's Guide will be sent upon receipt of an order for five or more copies of a workbook.

INSTRUCTIONS FOR THE STUDENTS

1. You learn the words in this course by reading them and hearing them and saying them again and again in natural situations and contexts. So you should do *every part* of the course carefully. *Do not leave out anything*. Follow all instructions carefully.
2. When you study the items in Word Study you will see blank spaces, but read each sentence softly to yourself, *including* the missing words. The blank spaces should be filled in by your mind's eye, but not with pen or pencil. The reason for this is that as soon as you *write* the words, you have lost your chance of revising this part of the work.
3. After you have gone through the Word Study items once, turn to the vocabulary list at the beginning of the unit. Read through the list and put a mark (✓) against the words you are sure that you know. If you do not feel sure about any word, turn back to the Word Study pages and study that word again. The reading passages and the little test at the end of the unit will also show you that there are some words you need to review (i.e. study again).
4. Notice that for the Dictation Exercises and Dictations you will need the tapes that are provided with this course *or* the help of someone who can speak English well.
5. You will find that you can read the Reading Passages without much difficulty, because you will be familiar with the vocabulary they contain. Try to understand the ideas and information in each passage. After reading a passage three or four times, write the *title* of the passage on a piece of paper and shut your book. Then try to write one or two paragraphs on the same topic (=subject), using ideas and sentences that you remember from your reading.

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UNIT VI

6.1 VOCABULARY

These are the words you will practice in this unit:

VERBS

*abandon	(a·ban·don)	(+ noun)
*activate	(act·iv·ate)	(+ noun)
adapt	(ad·apt·)	(+ noun + to)
adapt to	(ad·apt·)	(+ noun)
*breed		(+ noun)
convey	(con·vey·)	(+ noun)
crush		(+ noun)
deprive	(de·prive·)	(+ noun + of + noun)
desire	(de·sire·)	(+ noun)
disperse	(dis·perse·)	(+ noun)
eliminate	(e·lim·i·nate)	(+ noun)
emerge (from)	(e·merge·)	
emigrate (to, from)	(e·mi·grate)	
encounter	(en·count·er)	(+ noun)
evolve (into, from, or out of)	(e·volve·)	
explore	(ex·plore·)	(+ noun)
gather	(gath·er)	(+ noun)
*ignite	(ig·nite·)	(+ noun)
immigrate (into, from)	(im·mi·grate)	
land (in, on, at)		
migrate (to, from)	(mi·grate)	
penetrate	(pen·e·trate)	(+ noun)
perceive	(per·ceive·)	(+ noun)
pursue	(pur·sue·)	(+ noun)
react	(re·act·)	(+ noun)
reject	(re·ject·)	(+ noun)
release	(re·lease·)	(+ noun)
reproduce	(re·pro·duce·)	(+ noun)
rescue	(res·cue)	(+ noun)
reward	(re·ward·)	(+ noun)
select	(se·lect·)	(+ noun)
settle (in, on)	(set·tle)	(+ noun)
shelter	(shel·ter)	(+ noun + from + in, under)
struggle	(strug·gle)	
subsist	(sub·sist·)	
survive	(sur·vive·)	
*transplant	(trans·plant·)	(+ noun)
withstand	(with·stand·)	(+ noun)

NOUNS

*adaptation	(ad·apt·a·tion)	a calorie	(cal·o·rie)
an affair	(af·fair·)	a cluster	(clus·ter)
affairs	(af·fairs·)	combustion	(com·bus·tion)
the bulk of		a content	(con·tent)
a Calorie	(Cal·o·rie)	the contents (of)	(con·tents)

UNIT 6

6.1 VOCABULARY

NOUNS (cont.)

deprivation	(de-pri-va'-tion)	perception	(per-cep'-tion)
(a) desire (for, to)	(de-sire')	a predator	(pre'-da-tor)
dispersal	(dis-pers'-al)	prey (no plural)	
elimination	(e-lim-i-na'-tion)	(a) pursuit	(pur-suit')
emergence	(e-mer'-gence)	(a) reaction	(re-ac'-tion)
an emigrant	(e'-mi-grant)	(a) reproduction	(re-pro-duc'-tion)
emigration	(e-mi-gra'-tion)	rejection	(re-jec'-tion)
an encounter	(en-count'-er)	release	(re-lease')
(with)		a rescue	(res'-cue)
evolution	(e-vol-u'-tion)	a reward	(re-ward')
an expedition	(ex-ped-i'-tion)	a rival	(ri'-val)
exploration	(ex-plor-a'-tion)	selection	(se-lec'-tion)
an explorer	(ex-plor'-er)	shade	
*humidity	(hum-id'-i-ty)	(a) shelter	(shel'-ter)
an immigrant	(im'-mi-grant)	(a) sight	
immigration	(im-mi-gra'-tion)	a stem	
an impulse	(im-pulse')	a stimulus	(stim'-u-lus)
a jet		(pl. stimuli)	
maturity	(ma-tur'-i-ty)	(a) struggle	(strug'-gle)
a migrant	(mi'-grant)	(a) style	(sty'-ie)
(a) migration	(mi-gra'-tion)	subsistence	(sub-sist'-ence)
a nerve		survival	(sur-viv'-al)
offspring	(off'-spring)	a trunk (of a tree)	
*an outlet	(out'-let)	a vehicle	(ve'-hi-cle)
penetration	(pen-e-tra'-tion)	(a) vision	(vi'-sion)

ADJECTIVES

*accustomed to	(ac-cus'-tomed)	*mobile	(mob'-ile)
adaptable	(ad-apt'-able)	nervous	(nerv'-ous)
adapted (to)	(ad-apt'-ed)	optional	(op'-tion-al)
auditory	(aud'-it-or-y)	premature	(pre-ma-ture')
calorific	(cal-o-rif'-ic)	primary	(pri'-mary)
deprived of	(de-prived')	random	(ran'-dom)
desirable	(de-sir'-able)	secondary	(se'-cond-ar-y)
evolutionary	(e-vol-u'-tion-ary)	sparse	
*huge		*still	
immature	(im-mat-ure')	*submerged	(sub-merged')
jet		*underground	(un'-der-ground)
mature	(mat-ure')	visual	(vis'-u-al)

ADVERBS

primarily	(pri-mar'-i-ly)
sparsely	(sparse'-ly)
*underground	(un'-der-ground)

PHRASES

at random	(ran'-dom)
*in retrospect	(re'-tro-spect)
in sight (of)	
on impulse	(im-pulse')
to the rescue (of)	(res'-cue)

PREFIX

audio-	(aud'-i-o)
---------------	------------

Note: Words marked with an asterisk are defined in footnotes, exercises, or reading passages.

Unit VI

6.2 WORD STUDY

INSTRUCTIONS: Study the following words and the uses of them:

random
at random
 (adv. phrase)

When we take a *random* sample of something (e.g., of the soil in an area, of the rocks on the moon) we take some of the material from anywhere in the area, the first that we see or the first that comes to hand, without planning or choice. When a reporter speaks to a *random* sample of the people he meets in a certain street (to ask them for their views on a question), he speaks to people he happens to meet or whom he meets by chance, without choosing them by any method or by any criteria.

Random events or events which happen *at random* are chance events, i.e., events which are not planned, which have no purpose or direction or which do not (as far as we know) form part of any pattern, system, or regular sequence.

Examples: They dropped bombs at *random* all over the area. What appears to be *random* behavior on the part of insects or animals may have a purpose, or form part of a pattern. When teachers ask *random* questions it is their own fault if they get *random* answers. A hypothesis is not a *random* guess but a guess which has some basis in fact or logic.

struggle (with, to, or for)
(a) struggle (to or for)
subsist
subsistence
survive
rivals
withstand
eliminate
elimination
survival
adapted (to)
adapt to
adaptable

(a) Living things *struggle with* their enemies. They *struggle* against their difficulties. They *struggle* to overcome their difficulties or their enemies. When they *struggle* to overcome their difficulties or their enemies, they make great efforts to overcome them. People *struggle* to achieve their goals or to attain their ambitions. They *struggle* for power. When they *struggle* to achieve their goals or *struggle* for power they make great efforts to reach their goals or to obtain power. Some animals, perhaps most animals, have to *struggle* for existence. People who are not free *struggle* for freedom.

A *struggle* for something is a fight, or is like a fight, because it meets with resistance. A *struggle* is an effort which meets with resistance and which must therefore be intensified in order to overcome resistance. A *struggle* to lift something heavy is an effort which must be intensified in order to overcome the resistance of the heavy weight. A *struggle* for freedom is a struggle to be free. A *struggle* for existence is a struggle to exist, to live.

(b) Living things *subsist* to *subsist*, i.e., to live on the available food or means of existence. They *struggle* for *subsistence*, i.e., for the means of life or existence. They can only *survive* (go on living, continue to live) if they are successful in their *struggle* for *subsistence*. To succeed in their *struggle* for *subsistence*, to *survive*, they must compete successfully with other organisms, other living things. The means of *subsistence* are limited. There is not enough food, not enough room for all the animals and plants that *struggle* to *survive*. Only a certain number of them will *survive*. The organisms that *survive* will be the ones that overcome their enemies or *rivals* (=competitors) and succeed in obtaining the means of *subsistence*. All animals eat plants or other animals. This means that some plants and animals are a means of *subsistence* for other animals. In order to *survive*, plants and animals must compete successfully for the means of *subsistence*. They must also avoid becoming the means of *subsistence* for other animals. •

UNIT 6

6.2 WORD STUDY

(c) Living things have rivals and enemies. They struggle with their rivals and enemies. In order to survive they must *withstand* their rivals and enemies, i.e., they must **succeed in resisting them**, they must keep them off. In order to survive, living things must also withstand cold or hot weather and other difficult living conditions. Animals and plants that cannot withstand their rivals and enemies, that cannot withstand bad weather or difficult conditions of life, will not survive. They will not continue to live. They will die.

(d) The struggle for subsurvival is a hard struggle. This struggle *eliminates* the animals and plants which are too weak to withstand their rivals and enemies. It eliminates (removes and destroys*) the organisms which cannot withstand bad weather. Only the stronger plants and animals remain. The others are eliminated.

(e) The Presidential election in the U.S. is usually a struggle between the two major parties (Democratic and Republican) for the election of their chosen candidate. The initial struggle is, however, not a struggle between the parties, but between the candidates. The initial candidates put forward their claims at the special party conferences (called conventions) held by the two parties to choose the candidates who will represent them. At these conferences each party elects, by a secret vote, one candidate for the Presidency. Thus all the other party candidates are eliminated. Candidates can, however, stand as independents if they wish to do so.

To *eliminate* means to exclude, rule out and remove something (or someone) previously "in" or included in a group. This verb is often used in a context of choice (between things, people, possibilities, alternatives) or of rivalry or competition, because in both these situations something (or someone) remains or is retained or chosen, or is still "in the running," while other things, people, possibilities, etc., are eliminated (removed from, or ruled out of the group or the list; or not further considered).

"Eliminate" has various implications according to the context. When the context is a struggle for life or subsistence, **to be eliminated** implies to die or be destroyed, because in this struggle the competitors either survive or die. In the context of a Presidential election **to be eliminated** does not imply death but merely failure.

(f) In the struggle for subsurvival and for *survival* some organisms stand a better chance of survival than others. Animals or plants which are stronger than other members of their species stand a better chance of survival. Animals which are more intelligent and have greater ability to learn than other members of their species stand a better chance of survival. Animals which have learned to cooperate with each other, to protect or defend each other (or which do so instinctively) have a better chance of survival. Plants and animals which have developed organs specially appropriate for the environment in which they live have a better chance of survival than other species. Similarly, animals or plants which are physically weaker are more likely to be eliminated. Less intelligent animals with inferior ability to learn are more likely to be eliminated. Animals which do not protect each other, defend each other or cooperate with each other are more likely (other things being equal) to be eliminated. Animals and plants whose organs are less adaptive for their environment are more likely to be eliminated.

(g) On the whole, plants and animals are more likely to survive if they have physical organs which are appropriate or suitable for their environment. Plants or animals which have developed such organs are *adapted to* their environment. Animals which modify their behavior until it enables

*eliminate does not always carry the implication of "destroy," but it does in this context.

6.2 WORD STUDY

them to fit in with their environment and succeed in it are also a____ted to their en____ment. When a situation is quite new we are not accustomed to* it. In order to become accustomed to it we must *adapt* ourselves. We *adapt* our behavior to new situations or new conditions when we modify our behavior in accordance with the changed situations, so that we flourish or continue to flourish in spite of the change. We *adapt to* the new situation when we ad__pt our behavior in this way. Human beings can consciously a__pt themselves or their behavior to a new sit____ or a new en____nt. When people demonstrate their capacity to do this, we say they are *adaptable*. But they cannot, of course, a__pt their physical or bodily organs to a changed situation. (It may be that in the future they will be able to do this, through interfering with the mechanisms of inheritance.)

However we find that over long periods of time new species of plants and animals arise with modified organs, and new species of animals arise with modified behavior patterns, that are better a____ed to their environment than previous species. (How does this happen?)

(h) An elephant is a____ted to his life as a large vegetarian in the jungle by his long, fl____ble trunk, which enables him to reach and pull down the branches of trees. Small animals in the forest which provide meals for larger animals like lions and tigers can only s____ve if they are capable of high speeds and if they can communicate with each other about the presence of enemies. Animals which can comm____te with their own species and which can move fast are better a____ted to a hostile forest en____ment than animals without these ab____ties. Human beings have a____ted themselves to very diverse en____ments with the help of houses, clothes, fire, agriculture, and the machines they have invented and built. They have done more than this; they have made themselves practically independent of their environment. They have done so by creating arti____ial environments within the nat____l ones. The human species has sur____ed because up to now a balance has been maintained between men's *adaptation* to their environment and their ad____n of the environment to themselves.

mature
maturity
offspring
reproduce
(a) reproduction
immature
premature
emergence
emerge (from)
select
selection

(a) Some plants die before they are fully grown and developed. They die before they are *mature*. Some animals die before they are fully grown and developed. They die before they are m____re. They die before they reach *maturity*.

Plants which die before they reach m____ity do not produce seeds. Animals which die before they reach m____ do not produce *offspring*** (i.e., babies, children). Animals which are eli____ed in the struggle for sub____ce while they are still young do not become m____re. They die before they can produce o____spring, in other words before they can *reproduce* themselves. The process of giving birth to off____ or of producing seeds (which have the chance of becoming plants) is called *reproduction*.

An *immature* plant or animal is one which is not yet fully grown. An im____ure human being (boy, girl, etc.) usually means one who is psychologically undeveloped, at a childish mental level (though possibly capable of further development). Immature ideas are those uncultivated by knowledge of the subject; immature feelings and attitudes are those uncultivated by experience. We can also speak of i____re poems, paintings, etc., in similar senses.

Premature has a very different meaning. A premature birth is a birth which occurs before the right time. A baby born two months before the expected time is p____re. A pre____re decision is one which is made too soon, e.g., without sufficient thought, consultation, etc.

*accustomed to = to be familiar with a situation, an activity, a kind of treatment, etc., as a result of repeated experience

**offspring is the technical term used by scientists for the children of all kinds of animals. It is a collective noun (without a plural 's' form) and always takes a plural verb.

6.2 WORD STUDY

(b) To "reproduce" means to produce again (re = again). A *reproduction* sometimes means a copy, or a model, or something that is made to resemble another thing. A re_____tion of a picture is a copy of that picture. When animals produce _____spring they r_____ce themselves; they produce little copies of themselves. By doing this they also reproduce their species, because they produce young animals which have all the characteristics of the species. The only way in which a species of a plant or an animal can sur_____ is through the process or cycle of re_____. If plants and animals did not r_____ce their own kind, the sp_____s of which they are members could not s_____ve.

(c) A sp_____s has a good chance of sur_____ only if a large number of its members reach m_____ty. If only a few members of the s_____ reach m_____, only a few seeds or o_____ng will be produced, and the sp_____s will tend to die out.

But, as we have seen, there is a str_____le between sp_____s for the means of sub_____. They compete with each other for the m_____s of s_____ce.

Now, in this struggle, in this competition, which sp_____s will s_____ve? Which sp_____s will manage to r_____ce themselves in sufficiently large numbers to el_____te other species, or to el_____te those species which compete with them?

The obvious answer is that the surviving s_____s will be those which are best ad_____pted to their environment. If they are better a_____pted to their environment than their r_____ls, their competitors, they will s_____ve, because the members of these species will have physical organs or behavior patterns which enable them to get the food (the means of sub_____) they need and prevent other sp_____s from getting it. The fittest will s_____ve, that is to say those which are strongest and most successful because they are best ad_____ to the environment.

In a genus of animals, those species which are best a_____ted will breed* in large numbers and this will ensure continuity of the species.

(d) What factors give rise to new species? There is a **random** factor in the *emergence* of a new species, in the process by which a new species *emerges from* (i.e., comes out from, rises from, develops from) the species which already exist.

When an animal gives birth to offspring, or a plant produces seeds, these offspring or these seeds will rep_____ce the characteristics of their parents, on the whole. They will inherit their parents' characteristics. But these offspring and these seeds are never absolutely uniform. There are always slight differences between them. These differences are the result of variations in the original **reproductive** cells from which the young animals or plants develop. Now these variations (encoded in the original cells) are sometimes (though not often) sufficient to produce an important modification in the organs or behavior of the young plant or animal. A bird, for example, may be born with a much wider beak (= the hard part of the bird's mouth), or a monkey with six fingers or with a bigger brain (in comparison with the rest of its body), or a plant with a more sweetly smelling flower. Such modifications (called genetic mutations) occur at r_____m among a population of young plants or animals. The vast majority of the alterations are useless or even harmful to the growing plant or animal and so the organisms which have them do not s_____ve; harmful modifications are rapidly el_____ted.

Certain modifications, however, constitute real advantages to the plant or animal which has them. They help the organism to ad_____t itself better to the environment. Equipped with these advantages, the plant or animal (e.g., a monkey with a bigger brain) will reach m_____ty and reproduce itself

*breed = produce offspring. This verb is used of animals, not of plants.

6.2 WORD STUDY

and its offs_____ will all inherit the new advantageous characteristics. The monkey with the bigger brain will establish itself as a new species.

Thus in a population of young animals (of the same species) which includes a certain number of modified individuals, harmful modifications will be el_____ted (because the animals that have them will not s_____ve) and advantageous mod_____tions will be retained. If the modification retained is a major one, a new species will emerge—a species consisting of animals which all have the new characteristic.

(e) Darwin used the phrase “natural selection” to describe the process which permits the emer_____e of new species. To *select* means to choose or pick out certain things from a group, on the basis of certain criteria. *Natural selection*, therefore, means the process by which nature “chooses” or picks out certain species and permits them to survive; they are chosen or selected by nature on the basis of characteristics, acquired by chance, which prove to be advantageous to them.

The words “choose” and “select” normally imply a conscious purpose and a human agent.* However (like the verbs *analyze* and *evaluate*) “choose” and “select” can now be used with a computer as subject or agent. When a com_____er is provided with appropriate cr_____ia and the necessary program of instructions it can s_____ct or pick out things from a group, on the basis of determinate characteristics. In the process of “natural s_____tion,” however nature does not behave like a comp_____ because the comp_____ (like a person) “knows” in advance what the cr_____a for selection are.

In retrospect** we can point to certain features or characteristics which favored a species in the struggle of life, and enabled it to oust (i.e., drive out) others. But we are using the word “select” in a very unusual sense if we say that nature *selected* the species on the basis of their characteristics. The concept of sel_____tion implies purpose and preknowledge (or preinstruction).

However, what Darwin wanted to emphasize when he used this word was that certain **specific** factors, and a mechanism operating universally, were responsible for the emergence of new species. He wanted to show that although the variations in a species were **random** variations, it was not chance which afterwards divided them into two groups—the survivors and the non-survivors.

Further examples of the use of SELECT, SELECTION

The University football team will be s_____ed this week. Students are s_____d for admission to the college on the basis of an entrance test. The s_____n of books for a college library should depend on the needs of the students for whom they are s_____d. The majority of the candidates are _____ by the parties they represent. This jam is made from carefully s_____ fruit. We must _____ a title for the book.

evolve (from, or
out of and into)
evolution
evolutionary

(a) *Evolve, evolution* are contrasted in their use with **develop, development**.

Develop, development often apply to an individual (e.g., a city, a child, a situation) or to particular relations (e.g., trade relations between two countries, a friendship).

“Evolve,” “evolution” usually apply to species and to the forms of species, whether natural or artificial (e.g., the evolution of man, of the horse, of plants, of the novel, of the steamship, of architecture, of forms of communication).

*an agent = the person who does a thing; the person or thing causing something or responsible for something happening; see Unit 7.

In **retrospect = looking back at past events; (**retro** = back, **specere** = look at, in Latin)

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(b) One element of meaning (the most general element) in *evolution* is that of a continuous process of change, through which one species changes its form or changes into another species or gives birth to others.

In a few contexts "evolution" does not imply more than this continuous succession of changes. Thus we can speak of the **evolution of drama**, the **evolution of the miniskirt**, meaning little more than the history of these forms.

The verb "evolve" is seldom, if ever, used in this limited sense.

(c) In what has become its **central and also its technical sense**, *evolution* implies something more than a succession of changes. It implies change from a lower form of organization to a higher form, from a simpler to a more complex form, from a more primitive to a more advanced or civilized form.

The verb *evolve* follows this meaning. A species or a form *evolves from* something more simple or less highly organized *into* something more complex and more highly organized.

Examples: The e_____n of the brain began in the reptile (= snake) with a tiny expansion of one end of the spinal cord or backbone. From this tiny swelling the enormously complex human brain has e_____ed. About forty thousand years ago the cave man gave place to the first man (Cro-Magnon man) which probably originated in Central Europe. Since that time there has been no further e_____n in the bodily organs of man. All subsequent human e_____n has been cultural and social.

In the earlier part of its history, the e_____n of technology was almost independent of science. Take, for example, the automobile, the steamship, or the table knife. In these products e_____n from the earliest specimen to the finished form was affected surprisingly little by scientific progress.

Forms of art and human culture do not continue to e_____ as a matter of course. They may not continue to e_____, in the sense of progressing from lower to higher levels of organization or complexity. When cultural forms become inflexible and harden into a body of rigid custom and convention, this is a sign that e_____n has come to an end, or that it has come to an end in a certain direction.

(d) Note that "evolve," "evolution" apply to processes that take a considerable time—usually more than one man's lifetime. Even in the case of the e_____n of cultural forms or artificial products, the words "evolve," "evolution" therefore imply processes that take place outside men's conscious control.

(e) There has been more than one theory of "evolution." Darwin's theory and concept or conception of e_____n is the most famous and has been the most influential. It is the concept of "natural selection" (applied to the e_____n of natural species). Theories or concepts of e_____n, like Darwin's, seek to **explain** various features of the *evolutionary* process, e.g., stages in development from less to greater complexity, or the emergence and survival of certain species and the elimination of others.

It is, of course, a logical mistake to identify Darwin's concept of evolution with the meaning of the word "evolution." Darwin's c_____pt of e_____n is a **view of e_____n**, a way of looking at it which includes a theory (or explanation) of **some aspects of e_____n**. It has been pointed out that he has not explained every aspect of e_____n. Some scientific thinkers approach the problems of evolution in a different way, and their views are in some respects in conflict with Darwin's.

6.2 WORD STUDY

encounter
 an encounter
 (with)
 prey (no
 plural form)
 a predator
 pursue
 (a) pursuit

To *encounter* a person, animal, etc., is to meet a person, animal, etc., unexpectedly, or without prearrangement, or when opposition or hostility from the other party is expected. An *encounter* is an unplanned coming together or meeting, or a coming together of hostile persons; sometimes an *encounter* is a battle or a fight. To encounter problems, difficulties, changes, etc., is to be faced by them or to meet them.

Examples: (a) The President was unwilling to encounter his critics. When Mr. X spoke to the students he e_____ed unexpected opposition. If you undertake this project you are liable to e_____ many difficulties. My meeting with my friend in New York was an unexpected e_____. An e_____ between you and the man you have injured will not serve any good purpose.

An animal's *prey* is another animal, bird, etc., which it kills and eats. A *predator* is an animal which kills and eats another (as its *prey*). Lions, tigers, eagles, snakes (of some kinds) are predators.

Examples: (b) When they en_____ their p____y, not all p_____rs attack immediately. Some pred____ors kill their p_____ with their teeth, others (especially snakes) poison them, other (like spiders) bind them so they cannot move. Nature has equi_____ed some animals with long legs so that they can run fast and es_____e from their pre____rs. Nowadays a man does not often become the p____y of a lion or tiger. Even if he en_____s a lion or a tiger (which is not often) his intelligence or his weapons usually enable him to kill the animal or d_____nd himself successfully.

To *pursue* an animal, a person, etc., is to run after it or follow it in order to catch it. *Pursuit* is the action of *pursuing* something or someone.

Examples: (c) When it sees its pr____y, a lion pur____es it. When a small animal suddenly en_____s a pr____r, it runs away as fast as it can and the pre____r pur____s it. Mr. X likes to watch his cat's p_____it of a mouse. Heavy traffic in the street interfered with the officer's p_____t of the thief.

To *pursue* can also mean to work at something or to have it as one's purpose; the noun (a) *pursuit* can have corresponding meanings.

Examples: (d) Will you p_____e your studies after leaving school? He is at present engaged in scientific p_____ts. He decided to p_____ the career of a teacher. All human beings pu_____ happiness. The p_____t of wealth is a game for some people, a religion for others. He will stop at nothing in p_____t of his ambition.

shelter (in,
 under)
 shelter (from)
 (a) shelter
 (a) shade

We *shelter in* or *under* something when we go into it or under it to protect ourselves from rain, wind, or sunshine.

A house, a roof, etc., *shelters* us when it gives us protection *from* rain, wind, or hot sunshine; or from bombs or things thrown at us. A person shelters us when he provides us with *shelter*, i.e., with protection against rain, wind, sunshine, or against enemies or attacks. A *shelter* is a place which shelters us.

Shade (the uncountable noun) is the protection against sunshine given by a tree, a roof, etc., which casts a shadow; in the expression "light and shade," *shade* is darker color as contrasted with lighter color. A *shade* (the countable noun) is a degree or depth of a particular color. Shades of blue, for example, range from very dark blue to very light blue.

Examples: When it began to rain we sh_____tered under a tree. The high rocks sh_____d him from the wind. A wooden roof will not sh_____ you from bombs. When his enemies were pursuing him he was sh_____d by the villagers. A tent will give some _____, but it will not protect us from very hot sunshine. They were obliged to take _____

UNIT 6

6.2 WORD STUDY

from the storm. We must look for a _____ for the night. The abandoned* car formed an ideal shelter.

They sat in the shade of a great oak tree. The forest gives the animals shelter in summer and shelter in winter. There is not enough contrast between light and shadow in your drawing. The color of her dress was a very dark shade of green. The room was furnished in different shades of gray and yellow. This word has different shades of meaning (i.e., senses which vary slightly).

deprived of
deprive of
deprivation

A person is *deprived of* something when something which he needs or enjoys or which is his right is taken from him or kept from him, so that he is prevented from using it or enjoying it. We *deprive* a person of something of this kind when we take it from him or keep it from him. We can also say that a plant is *deprived* of moisture, a district is *deprived* of medical services, etc. *Deprivation* is the act of *depriving* or the state of being *deprived*.

Examples: The heavy shade of the oak trees deprived the house of light. Why should you deprive your children of a good education? If plants are deprived of moisture they will not flourish. A camel will survive even when it is deprived of water for several days. If young children are deprived of protein, their brains will not develop. Through no fault of their own many people nowadays are deprived of their rights as citizens. Deprivation of these rights means the loss of security and freedom. We know more about the outcome of physical deprivation than we do about the outcome of psychological deprivation.

(a) sight
in sight (of)
land (in, on, at)
explore
an explorer
exploration

Sight (the uncountable noun) means (a) the power of seeing or (b) the action of seeing or (c) the state of being seen or (d) the range of seeing, the limit within which something can be seen. A place or a person is *in sight* when it (or he) is within the limit in which it (or he) can be seen. People are *in sight of* something (e.g., a city from the air, land from the sea) when they can see it, especially when they could not see it earlier.

*A sight*** is something which can be seen, especially something worth seeing.

A plane *lands* when it comes down to earth, it may *land at* an airport, *on* an airfield, etc. Passengers *land* when they get off a ship.

A child or an animal *explores* its surroundings when it moves around in them and examines them to discover what they are like, what possibilities they offer, etc. A man explores a situation or a problem when he looks at it in different ways or investigates various aspects of it, in order to learn more about it. A man who explores a foreign country (travels in it to learn about it) is called *an explorer*, especially if he travels where no foreigner has been before. The act of exploring (in all these senses) is *exploration*.

Examples: The five senses are sight, hearing, touch, taste, and smell. My sight is not as good as it used to be. He has very poor eyesight. The speed of a powerful computer at work gives some people a strange feeling. We soon lost sight of the car in front of us. It was soon out of sight. We must not lose sight of the other implications of this word. We were in sight of the coast most of the time. In a few hours we shall be in sight of Los Angeles.

*abandoned = purposely left (in a place) by someone who does not intend to return to it, use it, or to be responsible for it any more.

**A sight (the countable noun) may also mean a device that helps us to observe, or an observation made with such a device (e.g., the sights of a gun, take a sight before firing the gun).

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The air hostess told them that San Francisco was now in _____ and that they would _____ in a few minutes. She said that the bus would take them to their hotel, and then they would be shown some of the s_____s of San Francisco. The ocean sparkling in the sunshine was a beautiful s_____. The passengers were eager to* ex_____ the city.

The ship reached New York at 5 a.m., but passengers were not allowed to l_____ until three hours later. My dog is busy ex_____ing the garden. A committee has been formed to ex_____ this problem. Captain Cook was a famous e_____. He was famous for his ex_____n in the Pacific region. Children learn by ex_____n and invest_____n. They should be encouraged to ex_____.

react (to, against)
(with, chem.)

(a) reaction
(to, against)
(with, chem.)

a stimulus
pl. stimuli

React and *(a) reaction* have nontechnical and technical senses. *A stimulus* is a technical or semitechnical word.

(a) Nontechnical senses. In general, *react* = respond, and *(a) reaction* = (a) response. Depending on the context, a favorable or unfavorable response may be implied.

Examples: How did he re_____ to your suggestion? What was his r_____n to your suggestion? Most children _____ (well) to kind treatment. Young people _____ against institutions which restrict their freedom. My proposal produced no r_____ so I repeated it. We are waiting to see how public opinion r_____s to the news.

(b) Technical senses. (i) In biology, *a stimulus* is anything which acts on and causes a reaction in a living thing, substance or structure, either by increasing the rate and force of its operation or by starting a new operation in it.

Correspondingly, *a reaction* in biology is any change or condition, act, or behavior caused in a living thing or substance by a stimulus. *To react* is to respond in this way to a st_____s.

Examples: Communication begins when one organism produces a st_____s intentionally, i.e., when one org_____m produces a st_____ in order to cause a r_____n in another organism. The eye is the sense organ which gives a r_____ to light. There are specialized organs in the bodies of animals which produce movements in r_____n to s_____i. The different tissues in a body r_____ to different s_____i in different ways.

(ii) In psychology, *a stimulus* is anything which causes an increased use of body or mind, generally for a certain purpose. *A reaction* may have the general meaning defined in (i) or may mean a turning *against* something in thought or feeling.

Examples: Abnormal behavior in children is often the result of their r_____ to painful or frightening experiences when they were younger. Pain st_____ have important biological and evolutionary functions.

(iii) In chemistry, *a reaction* is any chemical change or any process in which two or more substances have a chemical effect on one another causing other substances to be formed or set free.

Examples: A great deal of the work done by chemists in laboratories consists in experiments with chemical r_____ns, i.e., in creating conditions for chemical r_____s to take place. Chemists speak of a r_____n of one substance with another, for example the r_____n of oxygen with ethyl alcohol which produces a liquid (acetaldehyde) with a strong fruitlike smell and no color.

*were eager to = were anxious to, wished very much to