



Discovery

Module One Reading Enhancement

I. Warming Up





The most beautiful thing in the world is, precisely, the conjunction of learning and inspiration. Oh, the passion for research and the joy of discovery!

—Wanda Landowska, Polish musician

确切地说，世界上最美妙的事情就是学习与灵感的结合。哦，研究的激情与发现的欣喜并存！

—波兰音乐家旺达·兰多夫斯卡



There is no area of the world that should not be investigated by scientists. There will always remain some questions that have not been answered. In general, these are the questions that have not yet been posed.

—Linus Pauling, American chemist

世界上没有任何一个领域是科学家不能够研究的。总有一些问题悬而未决，甚至还未被提出。

—美国化学家 莱纳斯·鲍林



Man cannot discover new oceans unless he has the courage to lose sight of the shore.

—Andre Gide, French writer


只有鼓起勇气远离陆地，才有可能发现新的海洋。

—法国作家 安德烈·纪德

II. Watching and Discussing

1.

Have a brief look at the words and expressions below before watching the video.

	
superbly /sju:'pɜ:blɪ/ <i>ad.</i>	极度地
end up	结束，告终
take up	占据
swap /swɒp/ <i>vi.</i>	交换
camera /'kæmərə/ <i>n.</i>	摄像机
*experiment /ɪk'sperɪmənt/ <i>n.</i>	实验
unsuspecting /ˌʌnsə'spektɪŋ/ <i>a.</i>	信任的，无怀疑的
*exactly /ɪg'zæktli/ <i>ad.</i>	确切地

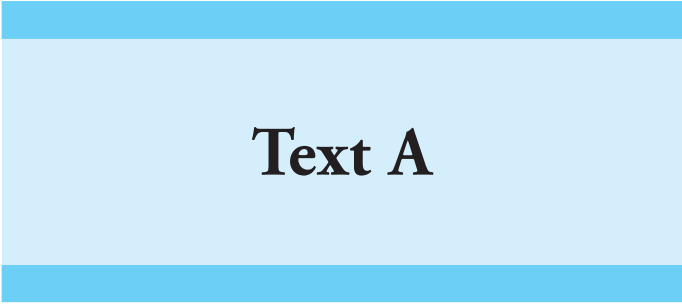


register /'redʒɪstə(r)/ v.	注意到
cope with	处理；对付
△ scrutinize /'skru:tənaɪz/ vt.	仔细查看
ignore /ɪg'nɔ:(r)/ vt.	忽视；不理睬
let on	泄露秘密
observation /,pɒzə'veɪʃn/ n.	观察力
tracksuit /'træksu:t/ n.	运动服
volunteer /vɒlən'tɪə(r)/ n.	志愿者
△ gorilla /gə'rɪlə/ n.	大猩猩
crucially /'kru:ʃəli/ ad.	关键地；至关重要地
☆ embarrassed /ɪm'bærəst/ a.	困窘的；不好意思的
* concentrate /'kɒnsntreɪt/ vi.	全神贯注
amazed /ə'meɪzd/ a.	惊奇的
☆ extraordinary /ɪk'strɔ:dnəri/ a.	非同寻常的；特别的

2. Watch the video again and answer the following questions.

(1) Do you think your eyes are always trustworthy? Why?

(2) Why do we sometimes fail to notice things happening right in front of our eyes?



Pre-reading Questions

1. In what way can music influence our life?
2. Do you agree with the idea that listening to classical music can help promote the development of intelligence in children?



Does Listening to Mozart Really Boost Your Brainpower?

By Claudia Hammond

(1) You have probably heard of the “Mozart effect”. It’s the idea that if children or even babies listen to music composed by Mozart they will become more intelligent. A quick Internet search reveals plenty of products to assist you in the task. Whatever your age there are CDs and books to help you to harness the power of Mozart’s music, but when it comes to scientific evidence that it can make you more clever, the picture is more mixed.

(2) The phrase “Mozart effect” was coined in 1991, but it was a study described two years later in the journal *Nature* that sparked real media and public interest about the idea that listening to classical music somehow improves the brain. It is one of those ideas that sound plausible. Mozart was undoubtedly a genius himself, his music is complex, and there is a hope that if we listen to enough of it, a little of that intelligence might rub off on us.

(3) The idea took off, with thousands of parents playing Mozart to their children, and in 1998 Zell Miller, the Governor of the state of Georgia in the U.S., even asked for money to be set aside in the state budget so that every newborn baby could be sent a CD of classical music. It’s not just babies and children who were deliberately exposed to Mozart’s melodies. When Sergio Della Sala, the psychologist and author of the book *Mind Myths*, visited a mozzarella farm in Italy, the farmer proudly explained that the buffalos were played Mozart three times a day to help them to produce better milk.

(4) I’ll leave the debate on the impact on milk yield to farmers, but what about the evidence that listening to Mozart makes people more intelligent? Exactly what was it that the authors of the initial study discovered that took public imagination by storm?

(5) When you look back at the original paper, the first surprise is that the authors from the University of California, Irvine are modest in their claims and don’t even use the “Mozart effect” phrase in the paper. The second surprise is that it wasn’t conducted on children at all: it was in fact conducted with those stalwarts of psychological studies—young adult students. Only 36 students took part. On three occasions they were given a series of mental tasks to complete, and before each task, they listened either to ten minutes of silence, ten minutes of a tape of relaxation instructions, or ten minutes of Mozart’s Sonata for Two Pianos in D major (K. 448).

(6) The students who listened to Mozart did better at tasks where they had to create shapes in their minds. For a short time the students were better at spatial tasks where they had to look at folded up pieces of paper with cuts in them and to predict how they would appear when unfolded. But unfortunately, as the authors make clear at the time, this effect lasts for about fifteen minutes. So it’s hardly going to bring you a lifetime of enhanced intelligence.

(7) Nevertheless, people began to theorize about why it was that Mozart’s music in particular could have this effect. Did the complexity of music cause patterns of cortical firing in the brain similar to those associated with solving spatial puzzles?

(8) More research followed, and a meta-analysis of sixteen different studies confirmed that



listening to music does lead to a temporary improvement in the ability to manipulate shapes mentally, but the benefits are short-lived and it doesn't make us more intelligent.

(9) Then it began to emerge that perhaps Mozart wasn't so special after all. In 2010 a larger meta-analysis of a greater number of studies again found a positive effect, but that other kinds of music worked just as well. One study found that listening to Schubert was just as good, and so was hearing a passage read out aloud from a Stephen King novel. But only if you enjoyed it. So, perhaps enjoyment and engagement are key, rather than the exact notes you hear.

(10) Although we tend to associate the Mozart effect with babies and small children, most of these studies were conducted on adults, whose brains are of course at a very different stage of development. But in 2006 a large study was conducted in Britain involving eight thousand children. They listened either to ten minutes of Mozart's String Quintet in D Major, a discussion about the experiment, to a sequence of three pop songs: Blur's "Country House", "Return of the Mack" by Mark Morrison and PJ & Duncan's "Stepping Stone". Once again music improved the ability to predict paper shapes, but this time it wasn't a Mozart effect, but a Blur effect. The children who listened to Mozart did well, but with pop music they did even better, so prior preference could come into it.

(11) Whatever your musical choice, it seems that all you need to do a bit better at predictive origami is some cognitive arousal. Your mind needs to get a little more active, it needs something to get it going, and that's going to be whichever kind of music appeals to you. In fact, it doesn't have to be music. Anything that makes you more alert should work just as well—doing a few star jumps or drinking some coffee, for instance.

(12) There is a way in which music can make a difference to your IQ, though. Unfortunately it requires a bit more effort than putting on a CD. Learning to play a musical instrument can have a beneficial effect on your brain. Jessica Grahn, a cognitive scientist at Western University in London, Ontario, says that a year of piano lessons combined with regular practice can increase IQ by as much as three points.

(13) So listening to Mozart won't do you or your children any harm and could be the start of a life-long love of classical music. But unless you and your family have some urgent imaginary origami to do, the chances are that sticking on a sonata is not going to make you better at anything.



New Words

* compose /kəm'pəʊz/ v.	1) write (music, opera, etc.) 写作, 创作 (乐曲、歌剧等) 2) write (a poem, speech, etc.) 写 (诗、讲稿等) 3) combine together to form a whole 构成 (整体); 组成
☆ reveal /rɪ'veɪl/ vt.	1) make (facts, etc.) known 使 (事实等) 显露出来 2) cause or allow (sth.) to be seen 展现或显示 (某物)
☆ assist /ə'sɪst/ v.	help someone to do something 帮助; 协助



harness /'hɑ:nɪs/ <i>vt.</i> <i>n.</i>	control and use the natural force or power of something 控制及利用 (自然界的力量) equipment consisting of leather straps and saddle and metal fittings by which a horse is controlled and fastened to the cart, plough, etc. that it pulls 马具 (包括皮带和马鞍以及金属器具)
*spark /'spɑ:k/ <i>v.</i>	make someone feel, think of, or remember something 触发; 激发
classical /'klæsɪkl/ <i>a.</i>	(of music) serious and traditional in style (指音乐) 古典的 (风格严谨而传统的)
*somehow /'sʌmhaʊ/ <i>ad.</i>	1) in some way; by some means 以某种方式; 通过某种途径 2) for a reason that you do not know or understand 由于未知的原因
*plausible /plə:'zəbl/ <i>a.</i>	(of a statement, an excuse, etc.) seeming to be right or reasonable; believable (指陈述、借口等) 似乎正确的; 似有道理的; 可信的
undoubtedly /ʌn'daʊtɪdli/ <i>ad.</i>	used for saying that something is certainly true or is accepted by everyone 无疑; 必定
☆ genius /'dʒi:nɪəs/ <i>n.</i>	a person who is unusually intelligent or artistic, or who has a very high level of skill, especially in one area 天才; 天赋; 天分
*budget /'bʌdʒɪt/ <i>n.</i>	the money that is available to a person or an organization and a plan of how it will be spent over a period of time 预算
*deliberately /dɪ'lɪbərətli/ <i>ad.</i>	done in a way that was planned, not by chance 故意地
*expose /ɪk'spəʊz/ <i>vt.</i>	1) let sb. find out about sth. by giving them experience of it or showing them what it is like 使受影响 2) uncover or make (sth.) visible; display 显露或露出 (某事物)
*melody /'melədi/ <i>n.</i>	arrangement of musical notes in an expressive order; tunefulness 美妙的音乐; 优美的音调
☆ psychologist /saɪ'kɒlədʒɪst/ <i>n.</i>	someone who studies how people's minds work and how this affects their behavior 心理学者
*mozzarella /ˌmɒtsə'relə/ <i>n.</i>	a mild, white Italian cheese that has a rubbery texture and is often eaten melted, as on pizza 白干酪: 一种味淡的、白色的并有弹性的意大利奶酪, 通常融化后放在比萨饼上吃
*buffalo /bʌ'fæləʊ/ <i>n.</i>	large ox of various kinds 水牛
*impact /'ɪmpækt/ <i>n.</i>	1) an effect (usually powerful) or influence 影响; 效果 2) the act of one object hitting another; the force with which this happens 撞击 (力); 冲击 (力)
*yield /ji:ld/ <i>n.</i> <i>v.</i>	the total amount of crops, profits, etc. that are produced 产量 1) bear, produce, or provide (a natural product, a result or profit) 生出、产生或提供 (自然产物、结果或利润) 2) stop resisting sth./sb.; agree to do sth. that you do not want to do 屈服; 让步
initial /ɪ'nɪʃəl/ <i>a.</i>	of or at the beginning 开始的; 最初的
*imagination /ɪˌmædʒɪ'neɪʃn/ <i>n.</i>	the ability to create pictures in one's mind 想象力



* claim /kleɪm/ <i>n.</i> <i>vt.</i>	a statement that sth. is true although it has not been proved and other people may not agree with or believe it 声称; 宣称; 断言 say that sth. is true although it has not been proved and other people may not believe it 声称; 宣称; 断言
* conduct /kən'dʌkt/ <i>vt.</i> <i>n.</i>	organize and/or do a particular activity 指挥 (某事物); 控制; 操纵 the way someone behaves, especially in public, in their job, etc. (人的) 行为; 品行
* stalwart /stɔ:'lʍət/ <i>n.</i>	a loyal supporter who does a lot of work for an organization, especially a political party (政党等的) 忠实拥护者
☆ psychological /ˌsaɪkə'lɒdʒɪkl/ <i>a.</i>	connected with the study of psychology (the scientific study of the mind and how it influences behavior) 心理学的
☆ occasion /ə'keɪʒən/ <i>n.</i>	a particular time when sth. happens (事情发生的) 时刻, 时候, 场合
relaxation /rɪ'læks'eɪʃn/ <i>n.</i>	ways of resting and enjoying yourself; time spent resting and enjoying yourself 消遣; 松弛; 放松
* sonata /sə'nɑ:tə/ <i>n.</i>	a piece of music for one instrument or for one instrument and piano, usually divided into three or four parts 奏鸣曲
* spatial /'speɪʃl/ <i>a.</i>	relating to space and the position, size, shape, etc. of things in it 空间的; 有关空间的; 存在于空间的
* unfold /ʌn'fəʊld/ <i>v.</i>	1) (cause sth. to) open or spread out from a folded state (使某物) 展开, 打开 2) be gradually made known; gradually make sth. known to other people (使某事物) 显露, 展现
* enhance /m'hɑ:ns/ <i>vt.</i>	increase (the good qualities of sb./sth.); make (sb./sth.) look better 增强 (某人/某事物的优点); 使 (某人/某事物) 看起来更好; 提高; 美化
* nevertheless /ˌnevəðə'les/ <i>ad.</i>	in spite of sth. that you have just mentioned 虽然如此; 然而
* theorize /θɪə'reɪz/ <i>v.</i>	suggest facts and ideas to explain sth.; form a theory or theories about sth. 建立理论; 创立学说
* complexity /kəm'pleksəti/ <i>n.</i>	the state of being formed of many parts; the state of being difficult to understand 复杂性
cortical /'kɔ:tɪkl/ <i>a.</i>	of, relating to, or consisting of cortex (outer layer of the brain or other organ) (脑或其它器官的) 外皮的, 皮层的
* confirm /kən'fɜ:m/ <i>vt.</i>	provide evidence for the truth or correctness of (a report, an opinion, etc.); establish the truth of 证实; 证明; 确认
temporary /'tempərəri/ <i>a.</i>	lasting or intended to last only for a short time; not permanent 暂时的; 临时的
* manipulate /mə'nɪpjuleɪt/ <i>vt.</i>	1) control or handle (sth.) with skill 熟练控制或操纵 (某事物) 2) control or influence (sb.) cleverly or by unfair means (巧妙地或不正当地) 控制, 操纵, 影响 (某人)



emerge /ɪ'mɜ:dʒ/ <i>vi.</i>	1) (of facts, ideas, etc.) become known (指事实、意见等) 暴露, 被知悉 2) appear or come out from somewhere 出现; 露出
*engagement /ɪn'geɪdʒmənt/ <i>n.</i>	being involved with sb./sth. in an attempt to understand them/it 专注
note /nəʊt/ <i>n.</i>	a single sound of a particular length and pitch (how high or low a sound is), made by the voice or a musical instrument; the written or printed sign for a musical note (乐器、嗓子等发出的) 单音, 鸣声, 音调, 调; 音符 a short piece of writing to help you remember sth. 笔记
☆ prior /'praɪə(r)/ <i>a.</i>	coming before in time, order or importance 较早的; 居先的; 较重要的
☆ preference /'prefərəns/ <i>n.</i>	favor shown to one person, group, etc. rather than another 优先权; 优待; 优惠; 喜好; 偏好
predictive /prɪ'dɪktɪv/ <i>a.</i>	relating to the ability to show what is going to happen in the future 预言性的; 预测性的
*origami /,ɒrɪ'gɑ:mɪ/ <i>n.</i>	the art or process, originally Japanese, of paper folding (源自日语) 折纸
*cognitive /'kɒgnətɪv/ <i>a.</i>	of or relating to cognition; related to the process of knowing, understanding, and learning something 认知的
arousal /ə'raʊzl/ <i>n.</i>	a state in which you feel excited or very alert, for example as a result of fear, stress, or anger 激励; 鼓励; 唤醒; 激发
alert /ə'lɜ:t/ <i>a.</i>	giving all your attention to what is happening, being said, etc. 警惕的; 警觉的; 机警的
instrument /'ɪnstəmənt/ <i>n.</i>	1) apparatus for producing musical sounds, e.g. a piano, violin, flute, or drum 乐器 (如钢琴、小提琴、笛或鼓) 2) implement or apparatus used in performing an action, esp. for delicate or scientific work 器具; 器械; 仪器
beneficial /,benɪ'fɪʃl/ <i>a.</i>	causing a good result; advantageous 有益的; 有用的; 有好处的
urgent /'ɜ:dʒənt/ <i>a.</i>	very important and needing to be dealt with immediately 紧急的; 迫切的



Phrases and Expressions

plenty of	很多; 大量
rub off (on)	因接触 (相处) 而对……产生影响
take off	突飞猛进
set aside	特意留出 (钱或时间)
take part (in)	参与
a series of	一系列的; 一连串的
fold up	折叠



in particular	特别；尤其
a sequence of	一系列的
appeal to	有感染力；有吸引力
just as well	也；无妨
make a difference	关系重大；有影响；起（重要）作用
do no harm	（做某事）并无害处（反而可能带来某些好处）



Proper Nouns

Claudia Hammond /'klɔ:diə 'hæmənd/	克劳迪娅·哈蒙德，英国作家，节目主持人，演讲人
Mozart /'maʊtsɑ:t/	莫扎特，奥地利作曲家
Nature /'neɪtʃə(r)/	《自然》（英国科学杂志名）
Zell Miller /zel mɪlə/	泽尔·米勒
the state of Georgia /'dʒɔ:dʒjə/	（美国）佐治亚州
Sergio Della Sala /'sɜ:dʒiəʊ 'delə 'sɑ:lə/	瑟吉欧·戴拉·萨拉，认知神经科学家
Mind Myths /'mɪθ/	《心智的迷思》（书名）
the University of California, Irvine /,kæli'fɔ:njə ə'vɪn/	美国加州大学埃尔文分校
sonata for two pianos D major (K.448) /sə'na:tə/	D大调双钢琴奏鸣曲（K.448号作品）
Schubert /'ʃu:bə:t/	舒伯特，奥地利作曲家
Stephen King /'sti:fən kɪŋ/	斯蒂芬·金，美国恐怖小说家
String Quintet in D Major /strɪŋ kwɪn'tet 'meɪdʒə(r)/	D大调弦乐四重奏
Blur /blɜ:(r)/	污迹乐队，英国另类摇滚乐队
Country House	望族之星（污迹乐队的单曲名）
Return of the Mack /'mæk/	麦克回来了（马克·莫里森的专辑及同名主打歌曲名）
Mark Morrison /'mɔ:rɪsn/	马克·莫里森，英国说唱歌手
PJ and Duncan /'dʌŋkən/	PJ&邓肯，英国偶像组合
Stepping Stone /'stepɪŋ stəʊn/	踏脚石（PJ&邓肯的单曲名）
Jessica Grahn /'dʒesɪkə græn/	杰西卡·格莱恩
Western University in London, Ontario /ɒn'teəriəʊ/	（加拿大）西安大略大学

Reading & Appreciating

I. Answer the following questions according to the passage.

1. What is the “Mozart effect”?
2. Why does the Mozart effect seem plausible?
3. Do people believe in the Mozart effect? Why?

Questions





4. What are the differences between the original study and the public understanding of the so-called Mozart effect?
5. Which study proves that Mozart isn't so special in inspiring human beings' intelligence?
6. According to the author, what is the key to people's improvement in predictive origami?
7. In what way can music help develop human beings' intelligence?
8. What is Mozart's real effect on the development of intelligence in children?

II. Read the following paragraph and learn it by heart. Pay particular attention to the pronunciation and intonation.

Although we tend to associate the Mozart effect with babies and small children, most of these studies were conducted on adults, whose brains are of course at a very different stage of development. But in 2006 a large study was conducted in Britain involving eight thousand children. They listened either to ten minutes of Mozart's String Quintet in D Major, a discussion about the experiment, or a sequence of three pop songs: Blur's "Country House", "Return of the Mack" by Mark Morrison and PJ & Duncan's "Stepping Stone". Once again music improved the ability to predict paper shapes, but this time it wasn't a Mozart effect, but a Blur effect. The children who listened to Mozart did well, but with pop music they did even better, so prior preference could come into it.



III. The text is made up of three parts. Try to give each part a heading. The first has been given.



Paragraphs	Headings
Part 1 (1-6)	An introduction to the Mozart effect: the main idea, the original study, and the effect it has had on human life.
Part 2 ()	
Part 3 ()	

Language Focus

IV. Choose an appropriate word or phrase from the box below to fill in the following blanks. Change the form if necessary.

	compose alert take off expose impact set aside appeal to reveal do no harm make a difference
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1. The transportation industry is one human factor that has had a significant _____ on our environment.
2. The swans eat native seaweeds growing on the surface ropes rather than the valuable crop of kelp, so they _____ to the commercial operation.
3. Between these explorations, I rested and tried to _____ music in my cabin. My plan was to write a sonata for piano and violin.
4. He is one of the top 22 players in college football who _____ in their community.
5. In the following two hours, you need to be _____, with your senses sharp.
6. The mayoral candidate is proposing two ballot measures: an amendment to the City Charter to _____ funds for the housing program and a separate measure to raise the transfer tax.
7. The economist said that if the economy _____ too sharply, inflation might simultaneously accelerate.
8. The answers in the interview can _____ whether a candidate is analytical, decisive, and innovative or has good judgment.
9. The recent pension changes were partly designed to _____ younger employees wanting more portable retirement benefits.
10. With their preferred food sources unavailable, they searched for food supplies farther away, which _____ them to greater danger.

V. The suffix -al can be added to some verbs, usually verbs of French or Latin origin, to form nouns to refer to abstract verbal actions, meaning “the process” or “the act”. Change the form of the words below and put them into the following sentences properly.



Extensions: more examples of this kind of suffix are: -ance (appearance, acceptance, ignorance), -ence (occurrence, existence, interference), -ion (division, distortion, creation), -ment (measurement, replacement, development).

	arouse arrive refuse deny propose try remove survive
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1. Emotional _____ can influence pain directly by increasing muscle tension.
2. Unfortunately, the government has been in _____ about the true state of its banks pretty much since the crisis began.
3. We have invaded the natural environment without regard to the real costs to human _____, until now.
4. The politician’s _____ from power resulted in a series of conflicts that led to hundreds



of thousands of deaths.

5. People would prefer you give them a gracious lie than an outright _____.
6. The Environmental Protection Agency will announce a _____ Friday to tighten the nation's gasoline standards.
7. The _____ of good weather is supposed to mean the _____ of tourists.
8. The new medicine has been on _____ for the past year, and now it has already come onto the market.

VI. Some nouns which retain their original Greek or Latin forms make their plurals according to the rules of Greek or Latin.



The phrase the “Mozart effect” was coined in 1991, but it was a study described two years later in the journal *Nature* that sparked real *media* and public interest about the idea that listening to classical music somehow improves the brain. “莫扎特效应”这一术语创造于1991年，但真正激起媒体和公众对这一话题兴趣的是两年后《自然》杂志中的一个相关研究。该研究认为，听古典音乐会从某种程度上提高智商。

medium—media

bacterium—bacteria

crisis—crises

analysis—analyses

terminus—termini / terminuses

basis—bases

phenomenon—phenomena

But some follow the English rules (though their original forms are still used sometimes).

dogma—dogmas / dogmata

formula—formulas / formulae

gymnasium—gymnasiums / gymnasia

antenna—antennas / antennae

stadium—stadiums / stadia

Sometimes there are two plural forms with different meanings.

appendix—appendixes / appendices (医学术语) 阑尾

—appendices (书的) 附录

index—indexes (书的) 索引

—indices (数学术语) 指数

Complete the following sentences, using proper plural forms of nouns.

1. Exactly which _____ (细菌) cause the infection is still unknown.
2. In fact, many _____ (现象) are not even subject to scientific explanations.
3. The thesis collection comprises over 3,000 higher degree research _____ (论文).
4. The history of _____ (运动场) and _____ (体育馆) is a complete history of sports development.
5. This book has two _____ (附录).



VII. A V-ing phrase can be used as the subject of a verb, the object of a verb, the object of a preposition, etc., playing the role of a noun or a noun phrase and referring to an activity or a process.

- So listening to Mozart* won't do you or your children any harm and could be the start of a life-long love of classical music. 因此，听莫扎特的音乐不会给你本人或者你的孩子带来任何坏处，它能够成为对音乐一生钟爱的起点。
- Did the complexity of music cause patterns of cortical firing in the brain similar to those associated with *solving spatial puzzles*? 复杂的旋律是否能够使大脑皮质产生与解决空间难题相关的类似的效应呢？
- Some people enjoy *listening to music*. 有些人喜欢听音乐。

Use V-ing phrases to complete the following sentences.

- _____ (做实验) will help to improve your practical ability.
- After _____ (确认我的预定), the receptionist asked the bellboy to show me to the room.
- Our modern civilization must not be thought of as _____ (被创造) in a short period of time.
- Since we have finished our work, we're considering _____ (协助他完成他的任务).
- His work is _____ (写讲稿) for the President.

Translation

VIII. Translate the following paragraphs into Chinese.

When you look back at the original paper, the first surprise is that the authors from the University of California, Irvine are modest in their claims and don't even use the "Mozart effect" phrase in the paper. The second surprise is that it wasn't conducted on children at all: it was in fact conducted on those stalwarts of psychological studies—young adult students. Only 36 students took part. On three occasions they were given a series of mental tasks to complete, and before each task, they listened either to ten minutes of silence, ten minutes of a tape of relaxation instructions, or ten minutes of Mozart's sonata for two pianos in D major (K. 448).

The students who listened to Mozart did better at tasks where they had to create shapes in their minds.

IX. Translate the following sentences into English, using the words or phrases given in the brackets.

- 天才不是天生的，而是后天造就的。(genius)





2. 她很快发现，对于像她这样薪水不高的人而言，可选择的房子不多。（modest）

3. 那些游戏具备的所有特征使它们理所当然地对儿童和各个年龄段的青少年乃至许多成年人都具有吸引力。（appeal to）

4. 不管多忙，我都要留出锻炼身体的时间。（set aside）

5. 你似乎给人一种印象，不管做什么，你总是虎头蛇尾没做完。（somehow）

6. 联合国正在向政府部门和私人机构发出紧急呼吁，以筹措资金对这一新发现的全球性流行疾病进行研究。（urgent）

7. 这项新技术在人工智能领域已经获得了普遍应用。（take off）

8. 中国特别鼓励外商投资高新技术产业和农业。（in particular）



Text B

Pre-reading Questions

1. Have you ever noticed or heard about variations in climate? What are they?
2. How do you understand climate changes' impact on our daily lives?



In an Era of Climate Change, Where Will the Fish, and the Money, Go?

By Susan Moran

(1) Like the American pika and some other land-based creatures, fish are on the move as they try to adapt to a changing climate. One place this is happening is the seas surrounding the Arctic Ocean. But precisely how fast, in what direction, and to what effect the fish will migrate from their home turf is a big unknown.

(2) Marine biologists and climate-modeling scientists are following their trail seeking answers. That trail emits a scent of money to fisheries operators. Although no commercial fisheries exist yet in the Arctic Ocean and adjacent continental shelf seas, operators know that could change. (Commercial fishing is currently concentrated on the sub-Arctic seas surrounding the Arctic Ocean.) Naturally, they want the potential bounty. So do nations inhabiting or otherwise potentially fishing in the Arctic.

(3) The seas around the Arctic Ocean are estimated to host at least 20 percent of all the fish in the world's seas. Aside from their economic promise the northern seas could also play a big role in contributing to global food security. "The world's growing population means (we) need more access to food resources," Lisbeth Berg-Hansen, Norway's Minister of Fisheries and Coastal Affairs, told the Arctic Frontiers Conference held in the northern Norwegian city of Tromsø. Norway exports more seafood than any other nation. Its cod and other commercial fisheries are concentrated in the Lofoten Islands in the Norwegian Sea, which boast the largest cod stock in the world.



(4) Predicting future patterns of fish distribution and migration is difficult in part because the surface water temperatures in the Arctic waters are as warm as they have ever been, leaving no historical comparison points. Further, scientific models used to estimate marine primary productivity—namely the availability of phytoplankton that are the key ingredients in the diet of zooplankton and fish—are still quite crude and lack data. “There are huge discrepancies between them ... something like two orders of magnitude,” said Benjamin Planque, a senior scientist at the Institute of Marine Research in Tromsø. The institute conducts research related to fisheries and makes recommendations to the fisheries industry.

(5) What is as clear as the pristine seas north of Norway, Sweden, Iceland, Finland, Denmark (including Greenland), Russia, the United States, and Canada is that fish will only travel where they can find enough food. That’s why many marine scientists are trying to better understand current and future primary productivity there. “We are talking about some of the most productive ecosystems found in the waters adjacent to the Arctic Ocean,” said Paul Wassmann, an Arctic biologist at the University of Tromsø. These waters are brimming with Greenland halibut, cod, capelin and Kamchatka king crab, along with those higher up in the food web—whales, seals, and other marine mammals. He cautioned, however, that it is “an open question” how shifts in primary productivity in various locations will translate into fish stocks.

(6) Here’s a snapshot of how some commercial fish species appear to be shifting:

(7) Cod are moving relatively slowly northward. Thanks to sound fisheries management practices among Norwegian and Russian operators and other factors, cod stock in the Barents Sea, located north of Norway and Russia, is at an all-time high, according to the Institute of Marine Research. Cod are nothing if not resourceful; they’ll eat each other (younger ones) when there are few choices.

(8) Mackerel have already expanded their distribution area to the north and west over the last few years, stretching well into Faroese and Icelandic waters. In fact, it’s a bone of contention between Iceland and Norway. And they may be heading to Russia, which Dr. Wassmann calls the “climate change winner.”

(9) Capelin don’t like super deep waters, so they are not expected to migrate into the Arctic Ocean itself.

(10) Back to the fish diet. Primary production relies on a slew of elements, including sunlight, water, and air temperature, currents, wind patterns, salinity, and sea ice cover and extent. All of these are moving targets in the Arctic under climate change. Arctic air temperature is expected to increase 6 to 10 degrees higher than global average by 2100, according to estimates from the Intergovernmental Panel on Climate Change and the Arctic Council. And over the last 30 years the ice volume in Arctic has shrunk by at least 70 percent.

(11) Climate affects all levels of food, especially those at the bottom of the food chain, phytoplankton. Other creatures that rely on phytoplankton, from zooplankton to fish to sea birds and whales, respond to climate indirectly, as Harald Loeng, research director of the Institute of Marine Research (IMR), noted at the conference.

(12) While the Arctic seas are extremely productive, they are also very stratified, meaning there’s



not much vertical mixing of nutrients in the ocean. Warming surface water temperature and melting ice result in stratification. As warming and thawing continue scientists expect the water column to be more stratified, which will prevent nutrients from filtering up to the surface.

(13) That process means there won't be enough food in the Arctic Ocean, at least not enough to lure a commercially harvestable amount of them. "It's unlikely, even if surface water is exposed to winds (which transport nutrients from the bottom toward the top of the water column), [that it] will be enough to erode that stratification," said Jean-Eric Tremblay, a biologist at Laval University in Quebec.



New Words

* current /'kʌrənt/ <i>a.</i> <i>n.</i>	happening now; of the present time 现在的; 当前的 the movement of water in the sea or a river; the movement of air in a particular direction (水、气等的) 流, 流动
* Arctic /'ɑ:ktɪk/ <i>a.</i>	of the regions around the North Pole 北极的; 北极区的
* pika /'pi:kə/ <i>n.</i>	any burrowing lagomorph mammal of the family Ochotonidae of mountainous regions of North America and Asia, having short rounded ears, a rounded body, and rudimentary tail 鼠兔
☆ creature /'kri:tʃə(r)/ <i>n.</i>	living being, esp. an animal 生物; (尤指) 动物
* surround /sə'raʊnd/ <i>vt.</i>	1) be all around sth./sb. 包围或环绕 2) move into position all around sb./sth., especially so as to prevent them from escaping; to move sb./sth. into position in this way (使某人/某物) 包围某人/某物; 围住某人/某物 (尤指使之无法脱逃)
☆ precisely /pri'saɪslɪ/ <i>ad.</i>	accurately and exactly 精确地; 准确地
* migrate /'maɪɡreɪt/ <i>vi.</i> migration /maɪ'ɡreɪʃn/ <i>n.</i>	1) move from one part of the world to another according to the season (指动物等) 迁徙 2) (of a lot of people) move from one town, country, etc. to go and live and/or work in another 迁居; 移居 the movement of large numbers of people, birds, or animals from one place to another 迁徙; 移居 (尤指到外地寻找工作或暂住一段时间)
* marine /mə'reɪn/ <i>a.</i>	of, near, found in, or produced by the sea 海的; 近海的; 海中的; 海产的
◇ emit /ɪ'mɪt/ <i>vt.</i>	send out gas, heat, light, sound, etc. 发射; 放射; 发出 (气、热、光、声等)
* scent /sent/ <i>n.</i>	1) smell left behind by an animal, that allows dogs, etc. to track it (动物的) 臭迹, 遗臭 2) characteristic smell of sth. esp. a pleasant one (某物特有的) 气味; (尤指) 香味



* fisheries /'fɪʃəri:z/ <i>n.</i>	(usu. pl.) areas of the sea where fish are caught in large quantities for commercial purposes 渔场 (商业捕鱼海域)
operator /'ɒpəreɪtə(r)/ <i>n.</i>	1) person who operates or owns a business or an industry (esp. a private one) 经营者 (尤指私人工商业的) 2) person who operates equipment, a machine, etc. (设备、机器等的) 操作者
* adjacent /ə'dʒeɪsnt/ <i>a.</i>	situated next to or near sth. 毗连的; 接近的
* concentrate /'kɒnsntreɪt/ <i>vt.</i> <i>vi.</i>	be present in large numbers or amounts somewhere, or cause people or things to be present in large numbers or amounts somewhere 集合; 集中 think very carefully about something that you are doing 全神贯注; 专心致志 (于某事物)
☆ potential /pə'tenʃl/ <i>a.</i> <i>n.</i>	that can develop into sth. or be developed in the future 可能存在或出现的; 潜在的 qualities that exist and can be developed 潜质; 潜力
* bounty /'baʊntɪ/ <i>n.</i>	sth. provided in large quantities 恩惠; 恩赐
* inhabit /ɪn'hæbɪt/ <i>vt.</i>	live in (sth.); occupy 居住于 (某处); 占据; 栖居于
* estimate /'estɪmənt/ <i>v.</i> <i>n.</i>	form an approximate idea of sth.; calculate roughly the cost, size, value, etc. of sth. 估计; 估算 (某项工作) 的费用 judgment or calculation of the approximate size, cost, value, etc. of sth. 估计; 估价
* host /həʊst/ <i>vt.</i> <i>n.</i>	arrange a special event and provide the area, buildings, equipment, or services needed for it 做东道主 1) someone at a party, meal, etc. who has invited the guests and who provides the food, drink, etc. (待客的) 主人 2) a country, city, or organization that provides the necessary space, equipment, etc. for a special event 东道主, 主办国等
promise /'prɒmɪs/ <i>n.</i> <i>v.</i>	1) a sign that sb./sth. will be successful 将获得成就、成果或成绩的迹象 2) written or spoken declaration that one will give or do or not do sth. 承诺; 许诺 assure (sb.) that one will give or do or not do sth. 承诺; 许诺
security /sɪ'kjʊərətɪ/ <i>n.</i>	protection against sth. bad that might happen in the future 安全
☆ access /'ækses/ <i>n.</i>	1) the opportunity or right to use sth. or to see sb./sth. (使用某物或接近某人的) 机会或权利 2) a way of entering or reaching a place 方法; 通路
* resource /rɪ'sɔ:s/ <i>n.</i>	supply of raw materials, etc. which bring a country, person, etc. wealth 资源
* cod /kɒd/ <i>n.</i>	a large sea fish with white flesh that is used for food 鳕鱼
△ boast /bəʊst/ <i>vt.</i> <i>vi.</i>	have sth. that is impressive and that you can be proud of 以……为荣 talk with too much pride about sth. that you have or can do 自夸; 自吹自擂



* stock /stɒk/ <i>n.</i>	the total amount of something that is available to be used in a particular area 储备量
distribution /ˌdɪstrɪˈbjʊːʃn/ <i>n.</i>	the way that sth. is shared or exists over a particular area or among a particular group of people 分布; 分配
* primary /ˈpraɪməri/ <i>a.</i>	main; most important; basic 首要的; 主要的; 基本的; (在时间或发展顺序上) 初始的, 最早的, 开端的, 起步阶段的
* productivity /ˌprɒdʌkˈtɪvətɪ/ <i>n.</i>	ability to produce (e.g. goods or crops) 生产力
namely /ˈneɪmlɪ/ <i>ad.</i>	used to introduce more exact and detailed information about sth. that you have just mentioned; that is to say 即, 就是
availability /əˌveɪləˈbɪlətɪ/ <i>n.</i>	the state of being able to be obtained or used 可及性; 可获得性
* phytoplankton /faɪtəʊˈplæŋktən/ <i>n.</i>	minute, free-floating aquatic plants 浮游植物群落: 自由浮动的微小水生植物群
* ingredient /mɪˈɡriːdɪənt/ <i>n.</i>	one of the things from which sth. is made, especially one of the foods that are used together to make a particular dish (烹调用) 材料, 原料, 成分
diet /daɪət/ <i>n.</i> <i>v.</i>	the kind of food that a person or animal eats each day (某人或动物) 通常吃的食物; 日常食物 eat only some foods or a little food, esp. to lose weight (尤指为减轻体重) 节食
* zooplankton /ˌzəʊəˈplæŋktən/ <i>n.</i>	plankton that consists of animals, including corals, rotifers, sea anemones, and jellyfish 浮游动物, 由动物组成的浮游生物, 包括珊瑚、轮虫、海葵和水母等
crude /kruːd/ <i>a.</i>	1) simple and not very accurate but giving a general idea of sth. 粗陋的; 粗略的 2) in the natural state; unrefined 天然的; 未提炼的 3) offensive or rude 粗俗的; 粗鲁的
* discrepancy /dɪsˈkrepənsɪ/ <i>n.</i>	a noticeable difference 不符; 不一致
* magnitude /ˈmæɡnɪtjuːd/ <i>n.</i>	a numerical quantitative measure expressed usually as a multiple of a standard unit 量级
* recommendation /ˌrekəmenˈdeɪʃn/ <i>n.</i>	an official suggestion about the best thing to do 推荐; 建议
* pristine /ˈprɪstɪn/ <i>a.</i>	not developed or changed in any way; left in its original condition 原始状态的; 未受损的
* ecosystem /ˈiːkəʊsɪstəm/ <i>n.</i>	all the plants and animals that live in a particular area together with the complex relationship that exists between them and their environment 生态系统
* halibut /hæˈlɪbət/ <i>n.</i>	any of several large, edible flatfishes of the genus Hippoglossus and related genera, of northern Atlantic or Pacific waters 大比目鱼
* crab /kræb/ <i>n.</i>	a sea animal with a hard shell, five legs on each side, and two large claws 蟹



* whale /weɪl/ <i>n.</i>	any of several types of very large mammal that live in the sea, some of which are hunted for their oil and flesh 鲸
* seal /si:l/ <i>n.</i>	animal with flippers that lives near and in the sea and eats fish 海豹
* mammal /'mæml/ <i>n.</i>	any animal that gives birth to live babies, not eggs, and feeds its young on milk 哺乳动物
* caution /'kɔ:ʃn/ <i>v.</i>	warn (sb.) about problems or dangers; warn (sb.) to be careful 警告 (某人) 当心某事; 警告 (某人) 小心
<i>n.</i>	being careful to avoid danger or mistakes; prudence 小心; 谨慎; 慎重
* snapshot /'snæpʃɒt/ <i>n.</i>	a short description or a small amount of information that gives you an idea of what sth. is like 简短描述
* species /'spi:ʃi:z/ <i>n.</i>	a class of plants or animals whose members have the same main characteristics and are able to breed with each other 物种
☆ management /'mænidʒmənt/ <i>n.</i>	the activity of controlling and organizing the work that a company or organization does (企业等的) 管理、经营
sound /'saʊnd/ <i>a.</i>	reliable and sensible 合理的; 明智的; 正确的; 稳妥的 in good condition; not hurt, diseased, injured, or damaged 完好的; 健康的; 健全的; 无损伤的
* mackerel /'mækrəl/ <i>n.</i>	a striped sea fish that has oily flesh and a strong taste 鲭鱼
* expand /'ɪk'spænd/ <i>v.</i>	become greater in size, number, or importance; make sth. greater in size, number, or importance (使某物) 增大, 增加, 增强, 扩展; 详述故事、论诉等, 引申
☆ stretch /stretʃ/ <i>vi.</i>	spread out over an area or a period of time; extend 绵延; 延续; 伸展
* contention /kən'tenʃn/ <i>n.</i>	disagreement, argument, or competition 争论; 争执; 争夺
contend /kən'tend/ <i>v.</i>	struggle in order to overcome a rival, competitor, or difficulty (与对手) 竞争; (与他人) 争夺; (与困难) 拼搏
* capelin /'kæpəlɪn/ <i>n.</i>	a small, edible marine fish of northern Atlantic and Pacific waters, related to and resembling the smelt 鳞鱼
* salinity /sə'lnɪtɪ/ <i>n.</i>	the saltiness or dissolved salt content of a body of water 盐浓度
* average /'ævərɪdʒ/ <i>n.</i>	the amount calculated by adding together several quantities, and then dividing this amount by the total number of quantities 平均数; 平均值
<i>a.</i>	found by calculating the average 平均的
volume /'vɒljʊ:m/ <i>n.</i>	1) the total amount of something 储量; 数量; 体积 2) book, esp one of a matching set or a series 书; (尤指一套或丛书中的) 册, 本, 卷, 集
* shrink /ʃrɪŋk/ <i>v.</i>	become or make something smaller in amount, size, or value (使) 收缩; (使) 萎缩
* extremely /ɪk'stri:mli/ <i>ad.</i>	to a very great degree 极端地; 非常地
* productive /prə'dʌktɪv/ <i>a.</i>	producing or able to produce goods or crops, esp. in large quantities 生产(性)的; 有生产能力; (尤指) 多产的
* stratified /'strætɪfaɪd/ <i>a.</i>	having several layers 分层的
* stratification /ˌstrætɪfɪ'keɪʃn/ <i>n.</i>	the division of sth. into different layers or groups 分层



* vertical /'vɜ:tɪkl/ <i>a.</i>	(of a line, pole, etc.) going straight up or down from a level surface or from top to bottom in a picture, etc. 垂直的
* thaw /θɔ:/ <i>vi.</i>	change from a frozen solid to a liquid by gradual warming; melt 融化
* nutrient /'nju:triənt/ <i>n.</i>	a substance that is needed to keep a living thing alive and to help it to grow 营养物质
☆ column /'kɒləm/ <i>n.</i>	something that has a tall narrow shape 柱状物
☆ filter /'fɪltə(r)/ <i>vi.</i> <i>vt.</i>	come into a place slowly or in small amounts 渗透 pass liquid, light, etc. through a special device, especially to remove sth. that is not wanted 过滤
* lure /luə(r)/ <i>vt.</i>	attract or tempt (a person or an animal) 吸引, 诱惑 (人或动物)
transport /træn'spɔ:t/ <i>vt.</i>	take goods, people, etc. from one place to another in a vehicle 运输
* erode /ɪ'rəʊd/ <i>v.</i>	gradually destroy the surface of sth. through the action of wind, rain, etc.; be gradually destroyed in this way (被) 侵蚀



Phrases and Expressions

on the move	在移动中
adapt to /ə'dæpt/	适应 (新环境等)
home turf /'tɜ:f/	自己的地盘; 主场
a scent of /sent/	察觉出某事物
aside from	除……之外 (别无); 除……之外 (尚有)
contribute to /kən'trɪbjʊt/	有助于
in part	部分地; (在) 某种程度 (上)
brim with /'brɪm/	注满; 充满
according to /ə'kɔ:dɪŋ/	据……所说; 据……所载
nothing if not	尤其; 极端
a bone of contention /kən'tenʃən/	争论的焦点
a slew of /'slu:/	大量; 许多
respond to /rɪ'spɒnd/	反应



Proper Nouns

Susan Moran /'su:zn 'mɒrən/	苏珊·莫兰, 自由撰稿人
the Intergovernmental Panel on Climate Change (IPCC) /,ɪntəɡʌvən'mentəl 'pænl 'kəlaɪmət/	(联合国) 政府间气候变化专门委员会
the Arctic Ocean /'ɑ:ktɪk 'əʊʃn/	北冰洋



Lisbeth Berg-Hansen /'lɪsbəθ 'berg hænsn/	利斯贝思·伯格-汉森，挪威渔业和海岸事务部部长
Norway /'nɔ:weɪ/	挪威
Minister of Fisheries and Coastal Affairs	渔业和海岸事务部部长
the Arctic Frontiers Conference /'mɪnɪstə(r) 'fɪʃərɪz 'kəʊstl ə'feə/	北极前沿会议，又译作北极边界会议
Tromsø /'trɒmsəʊ/	特罗姆瑟（挪威北部港市）
the Lofoten Islands /'lɒfətən 'aɪləndz/	罗弗敦群岛（挪威诺尔兰郡下辖的一个群岛，位于北极圈内）
the Norwegian Sea /nɔ:'wi:dʒən/	挪威海
Benjamin Planque /bən:'dʒəmɪn 'plæŋk/	本杰明·普朗克
the Institute of Marine Research (IMR) /'ɪnstɪtju:t mə'rɪ:n rɪ'sɜ:tʃ/	挪威海洋研究所
Sweden /'swɪ:dn/	瑞典
Iceland /'aɪslənd/	冰岛
Finland /'fɪnlənd/	芬兰
Denmark /'denmɑ:k/	丹麦
Greenland /'gri:nlənd/	格陵兰岛（丹麦岛屿）
Russia /'rʌʃə/	俄罗斯
the United States	美国
Canada /'kænədə/	加拿大
Paul Wassmann /'pɔ:l 'wɑ:səmɑ:n/	保罗·瓦斯曼
the University of Tromsø	（挪威）特罗姆瑟大学
the Barents Sea	巴伦支海
Faroese /'færəʊ'ɪz/	法罗群岛的
Icelandic /aɪslən'dɪk/	冰岛的
the Arctic Council /'kaʊnsl/	北极理事会
Harald Loeng /hɑ:'ræld/	哈拉尔德·娄昂，挪威海洋研究所研究主任
Jean-Eric Tremblay /dʒi:n 'erɪk 'trembleɪ/	杰恩-埃里克·特伦布莱
Laval University /'lɑ:vəl/	（加拿大）拉瓦尔大学
Quebec /kwɪ'bek/	魁北克（加拿大东部省名，首府名）

Reading & Exploring

I. Choose the best answer for each question according to Text B.

1. Why are fish leaving their home turf nowadays?



- A. Because the Arctic Ocean is a more suitable place for them to live in.
 - B. Because the climate is changing.
 - C. Because their home turf has been polluted.
 - D. Because other creatures are all on the move.
2. Why does the trail of fish migration emit a scent of money?
- A. Because there are already commercial fisheries in the Arctic Ocean and adjacent continental shelf seas.
 - B. Because Marine biologists and climate-modeling scientists are following the trail and it has scientific significance.
 - C. Because commercial fishing in the Arctic Ocean and adjacent continental shelf seas will be possible in the future.
 - D. Because fisheries operators and nations inhabiting or otherwise potentially fishing in the Arctic want the potential bounty.
3. Which country exports the most seafood in the world?
- A. Finland.
 - B. Norway.
 - C. Sweden.
 - D. Denmark.
4. Which factor is important to marine primary production?
- A. Water temperature.
 - B. Sunlight.
 - C. Salinity.
 - D. All of the above.
5. Since fish cannot live without food, _____ has a close relationship with fish stocks.
- A. zooplankton
 - B. seafood
 - C. surface water temperature
 - D. primary productivity
6. What does Dr. Wassmann mean by saying “climate change winner”?
- A. Russia benefits from climate change which leads to mackerel migration.
 - B. Climate changes winner into loser in the economic sector.
 - C. Climate change leads to contention between countries.
 - D. Climate change decides which country will win in the contention over the resource of mackerel.
7. In the last 30 years, the ice volume in the Arctic has shrunk by _____.
- A. about one third
 - B. less than two thirds
 - C. more than two thirds
 - D. thirty percent



8. In what way does climate affect the distribution of fish and money?
- A. All creatures in the Arctic seas are sensitive to any change in climate.
 - B. Sea water stratification caused by climate change will prevent nutrients from filtering up to the surface, which will be good for food storage and lure a great amount of fish.
 - C. Climate change leads to changes in the elements that marine primary production relies on, which in turn affects all levels of food and sea life.
 - D. Fish prefer warm climate and water to cold.

II. In-depth Discussion

1. List some climate change phenomena you've observed in your daily life.
2. How does climate change affect our lives?
3. How do human activities contribute to climate change?





Module Two Practice and Progress

Part I Communicative Practice



New Words

blindfold /'blaɪndfəʊld/ <i>n.</i>	蒙眼物
deceptively /dɪ'septɪvli/ <i>ad.</i>	迷惑性地；带有欺骗性地
challenge /'tʃælɪndʒ/ <i>n.</i>	挑战
resist /rɪ'zɪst/ <i>v.</i>	拒绝，抵制
stimulus /'stɪmjələs/ <i>n.</i>	刺激
hit the target /'tɑ:ɡɪt/	到达目的地；达到目标
incredibly /ɪn'kredəblɪ/ <i>ad.</i>	极其地，难以置信地
veer /viə(r)/ <i>vi.</i>	改变方向或路线
end up	结束；告终
weird /wiəd/ <i>a.</i>	奇怪的；不正常的
trajectory /trə'dʒektəri/ <i>n.</i>	(抛射体的)弹道，轨迹，轨道
tickle /'tɪkl/ <i>v.</i>	(使)发痒



start out	开始；着手进行
diameter /daɪ'æmɪtə(r)/ <i>n.</i>	直径
disparity /dɪ'spærəti/ <i>n.</i>	不同；不等
perception /pə'sepʃn/ <i>n.</i>	看法；理解
hilarious /hɪ'leəriəs/ <i>a.</i>	非常滑稽的
confidence /'kɒnfɪdəns/ <i>n.</i>	坚定的信赖；信心
topographical /ˌtɒpə'græfɪkl/ <i>a.</i>	地质的；地形学的
dispel /drɪ'spel/ <i>vt.</i>	驱走（某事物）；使消失
lean /li:n/ <i>vi.</i>	倾斜；弯曲；屈身
corkscrew /'kɔ:kskru:/ <i>a.</i>	螺旋状的；曲折的
delve /delv/ <i>v.</i>	探索；钻研
consistent /kən'sɪstənt/ <i>a.</i>	（指人、人的行为、观点等）一贯的，前后一致的
discernible /drɪ'sɜ:nəbl/ <i>a.</i>	可识别的
meander /mɪ'ændə/ <i>v.</i>	（指河流等）蜿蜒缓慢流动
futility /fju:'tɪləti/ <i>n.</i>	无益；徒劳
fluid /'flu:ɪd/ <i>a.</i>	不固定的；可改变的

I. Listening

You are going to watch a video clip in which the two hosts of the science entertainment TV program *Mythbusters* Jamie Hyneman and Adam Savage discuss the concept that humans can't walk in a straight line when blindfolded and conduct the walking-while-blindfolded experiment. Watch the video, and then circle True or False. You are also expected to make corrections to the false statements.

1. Scientists have already come up with a decisive conclusion that it's impossible for humans to walk in a straight line when blindfolded. (True / False)
2. The experimenters use GPS, little orange flags, and a specified destination as the three ways of telling how good they are at walking in a straight line while blindfolded. (True / False)
3. Before Adam's first blindfolded walk, he was not sure whether he could walk in a straight line and reach the target. (True / False)
4. Adam walked in a 200-foot-diameter circle in his first try for topographical reasons. (True / False)



5. Adam and Jamie’s experiment proves that humans cannot walk in a straight line when blindfolded. (True / False)

II. Gap-filling

Watch the video again and then fill in the blanks with the exact words you hear.

Adam: “Our testing here is pretty _____. We’ve got a field in which we can walk 3,000 feet in any direction that we chose. We’ve got a _____—this one here is from my personal _____—and headphones to remove any other stimulus. And we’re just gonna try and _____ in a straight line and see what happens.”
Sure, we’ll see what happens, but Jamie likes to be more science-y.

Jamie: “We’ve got three ways of telling how good we are at walking in a straight line while blindfolded. First is by using the global _____ system, or GPS. This little thing will be plotting a map for us that we can look at _____. Secondly, we’ve got these lovely little orange flags that we can _____. Are you ready to go?”

Adam: “What?”

Jamie: “Then lastly, we’ll know if we _____ the target because we will have had to have walked in more or less a straight line to get there.”

Adam: “How do I think I’m gonna do? I don’t think I’m gonna be _____ to _____ an incredibly straight line, but I don’t think I’m gonna be that far off. I think I may veer to the left or to the right, but I think I’ll _____ pretty close to my goal of that cluster of trees over there. Or is it there?”

III. Let’s Talk

In this video, Jamie and Adam introduce the process of their experiment as they carry it out step by step. Teach your partner how to write a good composition in exams, and then present your instructions to the class. The following are useful expressions and sentences for your reference.



Useful Expressions and Sentences

examine /ɪgˈzæmɪn/ vt.	仔细观察；检查；调查；审查
topic /ˈtɒpɪk/ n.	论题；话题；题目
shape one’s opinion	形成自己的观点
thesis statement /ˈθiːsɪs/	中心句；中心论点



complex sentence /'kɒmpleks/	主从复合句
draft /dra:ft/ <i>n.</i>	草稿
mentally /'mentəli/ <i>ad.</i>	心理上；在头脑中
develop a/the thesis statement	围绕主题句展开讨论
support /sə'pɔ:t/ <i>vt.</i>	支持（某理论、主张等）；证实；肯定
evidence /'evidəns/ <i>n.</i>	证据
data /'deɪtə/ <i>n.</i>	数据
comparison /kəm'pærɪsn/ <i>n.</i>	比较
conclusion /kən'klu:ʒn/ <i>n.</i>	结论
revise /rɪ'vaɪz/ <i>vt.</i>	复查（某事物）；（尤指）复核，校订，修正
edit /'edɪt/ <i>vt.</i>	校订
answer sheet /sɪ:t/	答题纸

IV. On the Stage

Work in groups of three students and act out how you plan to organize an English evening: one acts as the student advisor, the other as the student, another as the monitor.

Part II Writing Skills—Sentence Building 1: Basic Sentence Patterns of English

I. Sentence and Clause

- ✚ A **sentence** is the basic unit of language which is formed of a group of words and expresses a complete and independent thought. A sentence is made up of at least one clause.
- ✚ A **clause** is part of a sentence. It consists of at least a subject (noun or pronoun) and a predicate (verb).
An **independent clause** (or main clause) is a clause that can stand by itself. It makes sense by itself.



A **dependent clause** (or a subordinate clause) is a clause that augments an independent clause with additional information, but which cannot stand alone as a sentence. Dependent clauses either modify the independent clause of a sentence or serve as a component of it.

In the following examples, the independent clauses are underlined, while the dependent clauses are in italics.



- (1) The rain stopped.
- (2) Whenever she comes, she brings a friend.
- (3) He is my friend and that's why I have accepted the task.

II. Basic Sentence Patterns

⊕ According to the ways in which clauses are combined into sentences, sentences can be divided into four categories:

A **simple sentence** contains only one independent clause.

e.g. She teaches us geography.

How many pens do you have?

How funny the dog is!

Rose and Cameron went to the forest and collected a lot of insect specimens.

A **compound sentence** is composed of at least two independent clauses. The clauses are joined by a conjunction or a connective.

e.g. The future is bright; the road is tortuous.

Reading a classic is more challenging than reading a thriller, but it is also much more rewarding.

He failed in this year's college entrance examination; therefore, he decided to make a second attempt next summer.

A **complex sentence** is a sentence with one independent clause and at least one dependent clause.

e.g. Swimming keeps you fit because you have to use every muscle in your body.

Whether she will come or not is still a question.

I met a foreigner in the city last week who could speak Chinese well.

A **compound-complex sentence** is a sentence with at least two independent clauses and one or more dependent clauses.

e.g. The world is full of remarkable men and women, but even if we had time to go all over the earth to visit them, we should still not be able to meet more than a small fraction of them.

Although I like to go camping, I haven't had the time to go lately, and I haven't found anyone to go with.

⊕ Verbs are the core of sentences. Other sentence elements vary with the use of different types of verbs and, as a result, different sentence patterns will be presented.

SV Pattern (subject + intransitive verb)

e.g. It is raining outside.

The telephone rang.

SVCs Pattern (subject + link verb + subject complement)



e.g. We are students.

Why does milk turn sour?

SVO Pattern (subject + transitive verb + object)

e.g. Henry bought a bag.

The girl tapped her fingers on the desk impatiently.

SVOiOd Pattern (subject + transitive verb + indirect object + direct object)

e.g. Will you pass me the salt?

The police fined John five dollars.

SVOCo Pattern (subject + transitive verb + object + object complement)

e.g. We elected him our monitor.

She was seen running away from the scene of the crime.



In terms of style and rhetoric, a sentence may be loose, periodic, or balanced.

In a **loose sentence**, the main idea is placed first.

e.g. Read the letter again if you have time.

I could tell that he was disappointed by the tone of his voice and the look on his face.

In a **periodic sentence**, the main assertion or ideas don't appear until the end of the sentence.

e.g. If you have time, read the letter again.

By the tone of his voice and the look on his face, I could tell that he was disappointed.

A **balanced sentence** consists of two or more clauses that are parallel in structure and importance.

e.g. White chickens lay white eggs, and brown chickens lay brown eggs; so if white cows give white milk, do brown cows give chocolate milk?

And so my fellow Americans: ask not what your country can do for you—ask what you can do for your country.

III. Writing Task

Please write a paragraph with the title of *My First Time to...* Apply as many of the sentence patterns introduced above as possible.

