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夸克英语笔记

## Lesson 42 Recording and earthquake

记录地震 **被动语态** **强调句**

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### 📖 单词列表 \* 需要重点掌握

earthquake /'ɜːθkweɪk/ n. 地震

ninepin /'naɪn,pɪn/ n. 九柱戏中的木柱

delicate /'delɪkət/ adj. 灵感的

penholder /'pen,həʊldə(r)/ n. 笔杆

drum /drʌm/ n. 鼓状物

bluebottle /'bluːbɒtl/ n. 绿头苍蝇

graphic /'græfɪk/ adj. 图示的

transverse /'trænzvɜːs/ adj. 横向的

slumber /'slʌmbə(r)/ v. 睡眠

rigid /'rɪdʒɪd/ adj. 坚硬的

seismometer /saɪz'mɒmɪtə(r)/ n. 地震仪

legibly /'ledʒəbli/ adv. 字迹清楚地

wriggle /'rɪgl/ v. 扭动

graph /grɑːf/ n. 图表

longitudinal /,lɒŋgɪ'tjuːdən(ə)l/ adj. 纵向的

### 记录地震的需求 难度：4 级

※ An earthquake **comes like a thief in the night, without warning.**

『 **like a thief in the night** 不期而至/不知不觉；偷偷摸摸（习语） secretly or unexpectedly and without being seen 』

- The years, **like a thief in the night**, have stolen what you were.
- Innocence slipped away from me **like a thief in the night**.
- The sudden market crash comes **like a thief in the night**, surprising everyone. 突然的市  
场崩盘不期而至，让所有人都感到意外。
- Illness can sometimes come **like a thief in the night**, rapidly changing one's life. 疾病有  
时会像夜间的盗贼一样到来，迅速改变一个人的生活。

- The unexpected heavy snowstorm came **like a thief in the night**, paralyzing the city. 这场突如其来的大暴雪不期而至，使城市陷入瘫痪。

『 **without warning** suddenly and with no signs that it was going to happen, used about bad or dangerous things (贬义) 突然，突如其来地;没有警告/毫无预兆 』

- He blazed up **without warning**.
- Then, **without warning**, her husband left her.
- The system failed **without warning**, causing massive data loss. 系统在毫无预兆的情况下失败了，导致大规模数据丢失。
- The animal attacked the hunter **without warning**. 那只动物毫无预兆地袭击了猎人。

※ **It was necessary, therefore, to invent instruments that neither slumbered nor slept.**

『 **therefore** adv.因此/所以(不特别强调“因果”关系，多做插入语，用于补充说明) 』

- There is still much to discuss. We shall, **therefore**, return to this item at our next meeting.
- Progress so far has been very good. We are, **therefore**, confident that the work will be completed on time.
- The road was slick with ice; **therefore**, we drove cautiously. 道路上结了一层冰; 因此，我们小心翼翼地开车。
- She missed the deadline for the application; **therefore**, her request was denied. 她错过了申请截止日期; 因此，她的请求被拒绝了。

『 **instrument** 1. 乐器 』

- We have an old **musical instrument**.

『 **instrument** 2. 仪器，设备 』

- His telescopic observations are justly immortal; they aroused great interest at the time, they had important theoretical consequences, and they provided a striking demonstration of the potentialities hidden in **instruments** and apparatus.

『 **slumber** v. (fml.) sleep, esp. peacefully and comfortably 睡眠 (尤指睡得安稳而舒服) 』

- The baby was **slumbering** peacefully.

『 **neither slumbered nor slept** 既不打盹也不睡觉/时刻保持警醒 (同义词连用，表强调，如：“深仇大恨、美丽动人、拖拖拉拉...”) 』

- The security system was designed to neither **slumber nor sleep**, monitoring 24/7. 该系统被设计成时刻保持警醒，进行24/7的监控。

- In times of crisis, the emergency team must neither **slumber nor sleep** until the threat is neutralized. 在危机时期，应急小组必须时刻保持警醒，直到威胁被消除。

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## ※ Some devices **were** quite simple.

『 **quite simple** 相当简单 』

- The instructions for assembling the furniture were **quite simple**. 组装家具的说明相当简单。
- The solution to the complex problem turned out to be **quite simple**. 这个复杂问题的解决方案结果是相当简单。

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## ※ One, **for instance**, consisted of rods of various lengths and thicknesses which **would stand up on end** like **ninepins**.

『 **on end** 1. upright 直立，竖着 』

- He placed the box **on end** and sat on it.
- **The reader's hair stands on end** when he reads in the final pages of the novel ...

『 **on end** 2. continuously 连续地 』

- They argued for two hours **on end**.
- **Some plays are so successful that they run for years on end.**

『 **ninepins** n. [U] a game in which you roll a ball at nine bottle-shaped objects to try to hit them so that they fall 九柱戏 』

- The pillars were placed close together, standing up on end like **ninepins**. 柱子被紧密地放置在一起，像九柱戏的木瓶一样立着。
- to fall down or become ill / sick in great numbers 大量倒下；大批病倒

『 **consisted of** 由...组成/构成 』

- The original menu only consisted of five items. 最初的菜单只由五道菜组成。
- The exhibit hall mainly consisted of interactive displays and video screens. 这个展厅主要由互动展示和视频屏幕构成。

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## ※ **When a shock came, it shook the rigid table upon which these stood.**

『 **upon which (Formal Structure)** 在其上（正式结构） 』

- The foundation is the base **upon which** the entire structure rests. 地基是整个结构立在其上的基础。

- That decision was the turning point **upon which** his whole career hinged. 那个决定是他的整个职业生涯所依赖的转折点。

※ If it **were** gentle, only the more unstable rods **fell**. If it **were** severe, they all **fell**. 主真从虚（混合使用）教程视频第19分处

『 If it **were gentle/severe** 如果是轻微的/严重的（虚拟语气） 』

- If it **were** I, I would choose the more challenging option. 如果是我，我会选择更具挑战性的选项。

Demographers expect it to take decades for China's birth rate to recover — by which time China **may have become** the first country in history to **have grown** old before growing rich. (The Economist)

※ Thus the rods, by falling, and by the direction in which they fell, **recorded** for the slumbering scientist the strength of a shock that was too weak to waken him, and the direction from which it came.

『 **in ... direction** 向...方向 』

- Tony glanced **in** her **direction** and their eyes met.
- The girls pointed **in** the opposite **direction**.

『 **from ... direction** 从...方向 』

- There was a loud scream **from the direction of** the children's pool.

<b>in ... direction</b> 向...方向	They decided to drive <b>in</b> a northerly <b>direction</b> to reach the coast. 他们决定向北行驶以到达海岸。
<b>from ... direction</b> 从...方向	A cold wind was blowing <b>from</b> the <b>direction</b> of the mountains. 一阵冷风从大山的方向吹来。

分析记录原理 难度：6级

※ But instruments far more delicate than that **were needed** if any really serious advance **was** to be made.

『 **serious** adj. [only before noun] infml. used to emphasize that you are talking about a large amount of something 大量的；重大的；非常多的 』

- The President was in **serious** trouble. 大麻烦
- It's time you made some **serious** money. 赚大钱

『 **be to do** § (fml.) 1、打算, 想要 』

- I'm **to see** her tomorrow.
- The old farmhouse the family lived in **was to be** replaced by a new \$100,000 home.

『 **be to do** (fml.) 2、命令 』

- You're **to be** back by 10 o'clock. No one is to leave the building.
- You **are to wait** here in this room until I return.

『 **be to do** (fml.) 3、能够 』

- How **am I to pay** such a debt?
- We Chinese people **are not to be bullied**.
- The contemporary phenomenon of car worship **is to be explained** not least by the sense of independence and freedom that ownership entails.

『 **be to do** (fml.) 4、应该 』

- Such men **are to be pitied** rather than despised.
- As soon as he had hung up, he went over to the workmen and told them that if a policeman ordered them to go away, they **were not to take** him seriously.

Some books **are to be tasted**, others **to be swallowed**, and some few **to be chewed** and **digested**. — Francis Bacon

※ The ideal **to be aimed at** **was to devise an instrument that could record** with a pen on paper, the movements of the ground or of the table **as the** quake **passed by**.

『 **be aimed at ...** 1. 目的是... 』

- an energy program **aimed** at reducing our dependence on fossil fuels
- The regulations **are aimed at** the prevention of accidents at work.
- In education, the ideal **to be aimed at** is fostering critical thinking, not just memorization. 在教育中, 要达到的理想目标是培养批判性思维, 而不仅仅是记忆。

『 **be aimed at ...** 2. 针对... 』

- The criticism **was not aimed at** you.
- The book **is aimed at** people with no specialized knowledge.

『 **quake** n. (infml.) earthquake 地震 (通俗说法) 』

- The epicentre of **the quake** was near the town of Potenza. 地震震中在波坦察城附近。
- They recommended that the viaduct be replaced rather than **quake-proofed**. 他们建议更换这座高架桥，而不要对其做抗震处理。
- **The quake** was the biggest in 140 years. 这是140年来最大的一场地震。
- I've never felt **a quake** that strong, you know. 你知道，我从来没有遇到过如此强的地震。

※ While I **write** my pen **moves**, **but** the paper **keeps** still.

While I <b>write</b>	my pen <b>moves</b>	, but the paper <b>keeps</b> still.
时间状语从句	时间状语主句	并列句 (主系表)

※ With practice, no doubt, I could in time learn to write by holding the pen still while the paper **moved**.

『 **no doubt** 1. used for emphasizing that sth. seems certain or very likely 无疑, 毫无疑问 』

- **No doubt** she'll tell me everything when she's ready.
- **No doubt** I had blundered again. 不用说我又犯了个蠢错。
- There is no **doubt about** her suitability for the job. 毫无疑问, 她适合做这份工作。

『 **no doubt** 2. used for showing that you accept sth. is probably true, but this does not change your opinion 的确, 诚然 』

- **No doubt** she's very nice, **but** I just don't like her.
- **No doubt** many will regard these as harsh words, **but** regrettably they are true.
- **No doubt** the plan has some merits, **but** the cost is simply too high. 的确, 这个计划有一些优点, 但成本实在太高了。

<b>no doubt ... , but</b> ... 诚然..., 但是...	<b>No doubt</b> she is very talented, <b>but</b> she still needs to work on her team communication skills. 诚然她非常有才华, 但她仍需要在团队沟通技巧上下一番功夫。
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『 **in time** 1. before the time by which it is necessary for sth. to be done 及时 』

- The Titanic turned **just in time**, narrowly missing the immense wall of ice which rose over 100 feet out of the water beside her.
- It threatened to surround him completely, **but** Tazieff managed to escape **just in time**.
- I arrived **just in time** for my flight to Hawaii. 我正好及时赶上飞往夏威夷的航班。

<b>to be done</b> (主语) 有待被做; 要做	There is still a lot of work <b>to be done</b> before the website goes live. 在网站上线之前, 还有很多工作有待完成。
<b>be in time to do sth.</b> 及时做某事; 来得及做某事	<ul style="list-style-type: none"> <li>• Will I <b>be in time to</b> catch the train?</li> <li>• We ran to the station and were just <b>in time to catch</b> the last train. 我们跑向车站, 刚好赶上了最后一班火车。</li> </ul>
<b>be in time for sth.</b> 对某事来说是及时的	<ul style="list-style-type: none"> <li>• They hope to finish <b>in time for</b> a trade summit between America and the EU on May 28th.</li> <li>• The following day, however, the doctor consoled him by telling him that his chances of being able to leave hospital <b>in time for</b> New Year celebrations were good.</li> </ul>

『 **in time** 2. after a certain period of time, and esp. after a gradual process of change or development 逐渐地, 慢慢地 』

- **In time**, all Sam's money was paid back in this way.
- **In time**, it became an accepted fact that the Cox brothers employed a conscientious ghost that did most of their work for them.
- I'm sure you'll grow to like her **in time**. 我肯定你慢慢就会喜欢她了。
- If you remain patient, you will see results **in time**. 如果你保持耐心, 最终你会看到结果。

※ That **sounds** a silly suggestion, **but** that **was** precisely the idea adopted in some of the early instruments (seismometers) for recording earthquake waves.

『 **adopt** v. take over and have or use sth. as one's own 采纳, 采取, 采用 』

- The system has worked so well, that it **has been adopted in** other countries like Denmark, Norway, Finland, and New Zealand.
- For this reason there is no risk to the customer in the practice, **adopted by** some banks, of printing the customer's name on his cheques.
- The final design was precisely the idea **adopted** from the initial sketch. 最终的设计恰恰是被采纳的来自最初草图的想法。

<b>adopt a name</b> 采用/改用一个名字	After moving to the UK, he decided to <b>adopt</b> an English <b>name</b> to make it easier for his colleagues. 移居英国后, 他决定改用一个英文名, 以便同事称呼。
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<b>adopt a custom</b> 采纳/遵循一种习俗	Many immigrants <b>adopt</b> the local <b>customs</b> while still preserving their own traditions. 许多移民在保留自己传统的同时，也会遵循当地的习俗。
<b>adopt an idea</b> 采纳一个想法/主意	The committee liked the proposal and voted to <b>adopt the idea</b> for the upcoming festival. 委员会很喜欢这个提议，并投票决定在即将到来的节日中采纳这个想法。
<b>adopt a style of dress</b> 采取/穿某种风格的衣服	She chose to <b>adopt</b> a more formal <b>style of dress</b> after being promoted to executive. 在晋升为高管后，她选择采取一种更为正式的着装风格。

※ But **when** table, penholder and paper **are all moving**, how **is it** possible **to write legibly**?

『 **penholder** n. a holder or handle for a pen point 笔杆 』

- A tapered point of a pen, designed to be inserted into a **penholder** or fountain pen. 如果您在笔杆上插上金尖就成了金笔了。
- Analyzed the structure characteristics of the tip and **penholder** and molding technology, introduced the injection mold structure characteristics. 分析了笔尖和笔杆的结构特点与成型工艺，介绍了该类零件的注射模结构特点。

『 **legible** adj. (of print or handwriting) clear enough to be read easily (印刷或字迹) 清楚的，易读的 』

- The inscription was still **legible**.
- Ability to provide **legible** communication. 能够提供清晰的交流。

『 **legibly** adv. 清楚地 』

- Please write more **legibly**.
- The doctor's prescription was difficult to read, but the nurse managed to write it **legibly** for the pharmacist. 医生的处方难以辨认，但护士设法为药剂师清晰地书写了出来。

『 **illegible** adj. difficult or impossible to read; not legible 字迹模糊难以辨认的 』

- His handwriting is **illegible**. ⇒ He has a **doctor's handwriting**.
- His handwriting is neat. ⇒ He has a **teacher's handwriting**.

※ The key **to a solution of that problem** **lay** in **an everyday observation**.

『 **the key to...** ...的关键 』

- Such extreme cases must probably be taken with a grain of salt, but they do underline the general principle that the relationship between elephant and mahout is **the key to successful training**.
- Understanding the user experience is **the key to** a solution of that problem. 理解用户体验是解决那个问题的关键。

『 **lie in ...** 在于...;位于...之中 』

- The reason **lies in** its gravity.
- The breakthrough in the experiment **lay in** an unexpected observation made by a junior assistant. 实验的突破在于一位初级助理做出的一个意想不到的观察。
- The strength of the team **lies in** its ability to collaborate under pressure. 这支团队的力量在于其在压力下协作的能力。

**the key to ... lies in**  
... 的关键在于...

- **The key to** success **lies in** diligence.
- **The key to** successful language learning **lies in** consistent daily practice. 语言学习成功的关键在于持之以恒的每日练习。

※ Why **does** a person standing in a bus or train **tend** to fall **when a sudden start is made**?

『 **tend to** 倾向于...; 往往... 』

- Morals **tend to** be deeply ingrained. 道德观念往往是根深蒂固的。
- Young trees **tend to** fall in strong winds if their roots are not deep enough. 如果根不够深, 幼树在强风中倾向于跌倒。
- The drugs **tend to** cause drowsiness. 这些药常常使人昏昏欲睡。

※ It is because his feet **move on** , but his head **stays** still.

『 **move on** 向前移动;继续 』

- Can we **move on** to the next item on the agenda? 我们可以接着讨论下一项议程吗?
- Let's **move on** to the prickly subject of taxation reform. 咱们继续讨论下一项税制改革这个棘手的问题吧。
- Go, if you must **move on** alone. 去吧, 如果你必须独自上路。

※ A simple experiment **will help** us a little further.

『 **a little further** 更进一步 』

- Collecting more data will help us **a little further** in confirming the hypothesis. 收集更多数据将帮助我们在确认假设方面更进一步。
- As he moved the car **a little further** forward, the rope broke. 当他把车再往前挪一点时，绳子断了。
- They carry it **a little further** than that. 他们比普通人看的更远一些。
- Let me explain this **a little further**. 让我更进一步来解释一下这个问题。

### ※ **Tie a heavy weight at the end of a long piece of string.**

『 **string** n. [U & C] a strong thread made of several threads twisted together, used for tying or fastening things 线绳 』

- I need a piece of **string** to tie this package. 不可数
- The piece segues into his solo with the **strings**. 可数
- He wrapped the package in brown paper and tied it with **string**. 他用棕色包装纸把包裹包好，又用细绳捆上。

### ※ **With the hand held high in the air, hold the string so that the weight nearly touches the ground.**

『 **hold** v. to put a part of your body into a particular position 举起(独立主格里的hold) 』

- She was **holding** her hand to her heart.

『 **high** (物理意义的“高”) / **highly** 抽象的高 (高度) 』

- He climbed **high** up the mountain.
- It is **highly** confidential.
- The birds were flying **high** in the sky. (物理位置)
- He is a **highly** respected educator in his field. (抽象程度：高度地)

<p><b>deep</b> <b>deeply</b></p>	<ul style="list-style-type: none"> <li>• He pushed the stick <b>deep</b> into the mud.</li> <li>• He was <b>deeply</b> moved.</li> <li>• They dug <b>deep</b> into the ground to find water. (物理深度)</li> <li>• I was <b>deeply</b> moved by the student's progress. (抽象感情：深刻地)</li> </ul>
<p><b>wide</b> <b>widely</b></p>	<ul style="list-style-type: none"> <li>• Open your mouth <b>wide</b>.</li> <li>• He seems to be <b>widely</b> known here.</li> <li>• Open your mouth <b>wide</b> so the dentist can see. (物理宽度/程度)</li> <li>• English is <b>widely</b> used as a second language. (抽象范围：广泛地)</li> </ul>

<b>sharp</b> <b>sharply</b>	<ul style="list-style-type: none"> <li>We're meeting at one-thirty <b>sharp</b>.</li> <li>turn <b>sharp</b> left / right</li> <li>Interest rates have fallen <b>sharply</b> over the last few weeks.</li> <li>The government has been <b>sharply</b> criticized for human rights violations.</li> <li>Please turn <b>sharp</b> left at the next intersection. (物理/直接: 突然地)</li> <li>Stock prices fell <b>sharply</b> after the news. (抽象变化: 剧烈地)</li> </ul>
<b>low</b> adj./adv. <b>lowly</b> adj.	<ul style="list-style-type: none"> <li>The plane flew <b>low</b>.</li> <li>We were, however, worried about our nearest neighbours, whose farm was <b>low</b> lying and who were newcomers to the district.</li> <li>a <b>lowly</b> servant <small>adj.地位低</small></li> <li>If we were able to discover <b>lowly</b> forms of life like bacteria on another planet, it would completely change our view of ourselves.</li> <li>The plane was flying very <b>low</b> over the trees. (物理高度)</li> <li>He started his career in a <b>lowly</b> position at the firm. (抽象地位: 卑微的/地位低的)</li> </ul>

## 地震记录的机器 难度: 5 级

※ Now **move** the hand to and fro and around but not up and down.

『 **to and fro** if sb. or sth. moves to and fro, they move in one direction and then back again 来来回回地 』

- The swing rocked **to and fro**.
- I was disturbed by all the people walking **to and fro** outside the office.
- The boat rocked **to and fro** on the choppy water. 船在波涛汹涌的水面上来回摇晃。

<b>back and forth</b> 来来回回地 (moving first in one direction and then in the opposite one)	<ul style="list-style-type: none"> <li>She swayed gently <b>back and forth</b> to the music.</li> <li>He paced <b>back and forth</b>. 他来回踱步。</li> </ul>
<b>from side to side</b> 来来回回地 (from left to right and from right to left)	<ul style="list-style-type: none"> <li>The curtains were swinging from side to side in the breeze.</li> <li>The Cutty Sark rolled <b>from side to side</b> and it became impossible to steer her.</li> <li>But as the paper moved <b>from side to side</b> under the pen point, its movement would be recorded in ink upon its surface.</li> </ul>

『 **up and down** if sth. moves up and down, it moves towards a higher position and then back to a lower position 上上下下地 』

- The boat was moving **up and down** on the sea.
- The earth trembled and the house seemed to be moving **up and down**.
- The crane can move forward and backward, but not **up and down**. 起重机可以向前和向后移动，但不能上下移动。

※ **It will be found that the weight moves but slightly or not at all.**

『 **moves slightly** 稍微一动 』

- The needle on the gauge **moved but slightly**, indicating a minor change. 仪表上的指针只移动了一点点，表明变化很小。
- You can easily see all their bones' shapes as long as they **move slightly!** 肩部的骨头，只要稍稍一动就可以看到所有的骨头形状！

※ **Imagine a pen attached to the weight in such a way that its point rests upon a piece of paper on the floor.**

『 **Imagine** v.想象，设想 』

- **Imagine their dismay when they found a beautifully-cooked wallet and notes turned to ash!**
- **Imagine** loving your enemy and doing good to those who hated you. 想像着爱你的敌人，为仇人做好事。
- One can **imagine** how regretful he was. 可以想像他是多么懊悔。

『 **be attached to ...** 1. 与...连在一起 』

- **Lined up against the wall, there were long thin wires attached to metal spheres.**
- The warning label was securely **attached to** the product. 警告标签牢固地连接到产品上。
- A trailer **was attached to** the rear of the truck. 卡车后面挂了一辆拖车。

『 **be attached to ...** 2. 依恋... 』

- **She was sentimentally attached to this house, for even though it was far too big for her needs, she persisted in living there long after her husband's death.**
- She **is** very **attached to** her family and friends. 她非常喜欢她的家人和朋友。
- I've never seen two people so **attached to** each other. 我从未见过两个人如此形影不离。

『 **rest on / upon** sth. 1. 靠在...上面 』

- **She stood three feet high and her hands rested on her hip.**
- The weary traveler finally allowed his head to **rest upon** the soft pillow. 疲惫的旅行者终于允许他的头停留在柔软的枕头上。

『 **rest on / upon sth.** 2. 基于... 』

- His fame **rests** more **on** his plays than on his novels.
- Does the economy **rest on** too narrow a base? 这种经济的基础是否过于狭窄?

『 **in such a way that...** 以至于...的方式 』

- She arranged the lights **in such a way** that they highlighted the painting perfectly. 她以至于它们完美地突显出画作的方式布置了灯光。
- And **in such a way** that it became a weapon in the cold war. 这样一来，它会变成冷战中的一件武器。
- The world has been shaped by technology **in such a way** that it is no longer surprising. 世界已经被技术用这样一种方式定型了，这已经没什么好惊讶的了。

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※ **Imagine an earthquake shock shaking the floor, the paper, you and your hand.**

『 **imagine sb. doing sth.** 想象某人正在做某事 』

- I can easily **imagine** him **becoming** a successful entrepreneur in the future. 我完全可以想象到他未来成为一名成功企业家的样子。
- She could **imagine** dark-robed figures **moving** silently along the stone corridors.
- **Imagine** you and me **going** to outer space. 设想一下你和我将去到外太空。

---

※ **In the midst of all this movement, the weight and the pen would be still.**

『 **in the midst of ...** 1. while sth. is happening or being done 在...发生期间 』

- a country **in the midst of** a recession
- She discovered it **in the midst of** sorting out her father's things.
- She alone remained calm **in the midst of** all the confusion.

『 **in the midst of ...** 2. in the middle of a place or a group of things or people 在...之间(地点) 』

- I suddenly realized I was standing **in the midst of the crowd**, but I couldn't see my friends anywhere. 我突然意识到自己正站在人群之中，却到处也看不到我的朋友。
  - He described it as 'a very agreeable situation located within two small hills **in the midst of** which flowed a great river'.
  - The small cottage sat peacefully **in the midst of** a dense pine forest. 那座小木屋静静地坐落在茂密的松树林之中。
  - **In the midst of** the chaos, she remained surprisingly calm. 在混乱之中，她出奇地保持着冷静。
-

※ But **as** the paper **moved** from side to side under the pen point, its movement **would be recorded** in ink upon its surface.

『 **in ink** 用墨水写(钢笔) 』

- Please write **in ink**, not **in pencil**.
- The data from the sensor would be recorded **in ink** upon the chart. 来自传感器的数据会以墨水的形式被记录在图表上。
- The letter was written **in ink**. 这封信是用钢笔写的。

※ It was **upon this principle** that the first instruments **were made**, but the paper **was wrapped** round a drum which rotated slowly.

『 **on / upon ... principle** 依照...理论或原则 』

- The country is run **on socialist principles**.
- The project worked **on the principle** that each person's experience was equally valuable.
- It **was upon this principle** that the new engine was designed. 正是基于这个原理，新引擎被设计了出来。

『 **in principle** 1. 原则上 (但尚未考虑细节) 』

- Politicians agree, **in principle**, so America and the EU have been trying to reach a deal which would eliminate the need to double-test many products.
- **In principle**, this makes sense. 原则上讲得通。
- Is there a difference **in principle**? 有没有原则上的区别呢?

『 **in principle** 2. 理论上 (但尚未发生) 』

- **In principle**, the new software should make the accounting system a lot simpler.
- Even assuming this to be **in principle** possible, it will not be achieved soon.
- **In principle**, it should not be too hard. 原理上，这应该不会太难。

『 **wrap sth. round / around sb. / sth.** 将某物缠绕/包裹在某人或某物上 』

- Ella **wrapped** a thick coat **around** her shoulders.
- He **wrapped** a bandage **around** my injured wrist.
- She **wrapped** a warm scarf **around** her neck before heading out into the snow. 出门踏入雪地前，她把一条暖和的围巾围在脖子上。

『 **drum** n. sth. that looks like a drum, esp. part of a machine 鼓状物，鼓状零件 』

- The mixture flows to a revolving **drum** where the water is filtered out. 混合剂流过旋转着的滚筒时水分便从中滤出。
- The **oil drum** leaks. 油桶漏了。
- **Drum brake** with large clearance between the feet or oil. 制动蹄与制动鼓之间的间隙过大或蹄油。
- The electrical cable was neatly wrapped round **a drum** before shipping. 电缆在运输前被整齐地缠绕在一个鼓筒周围。

※ As long as all **was** still, the pen **drew** a straight line, **but while** the drum **was being shaken**, the line that the pen **was drawing** **wiggled** from side to side.

『 **as long as** 在...的时候, 只要...就 』

- **As long as** you're happy, that's all that matters. 只要你幸福, 这就是最重要的事情。
- **As long as** all was still with the patient, the doctor decided to wait. 只要病人的情况一切保持静止, 医生决定等待。
- **As long as** you have your health, nothing else matters. 只要身体健康, 其他任何事都无关紧要。

**so long as** 只要...  
要...

**So long as** there is a demand for these drugs, the financial incentive for drug dealers will be there.  
只要对这些毒品有需求, 也就存在着对贩毒者的经济诱因。

※ The apparatus thus described, **however**, **records** only the horizontal component of the wave movement, **which is, in fact**, much more complicated.

『 **apparatus** n. [U] = equipment 仪器, 设备 』

- **With experience, and with improved apparatus**, it is now possible not only to locate a shoal but to tell if it is herring, cod, or other well-known fish, by the pattern of its echo.
- His telescopic observations are justly immortal; they aroused great interest at the time, they had important theoretical consequences, and they provided a striking demonstration of the potentialities hidden in instruments and **apparatus**.

『 **thus** adv. in this way, like this 以此方式, 如此, 这样 』

- calculate the area of the triangle **thus** formed 计算这样形成的三角形的面积
- Hold the wheel in both hands, **thus**. 用双手握住方向盘, 像这样。
- The process **thus described** requires specialized tools. 如此描述的过程需要专门的工具。

※ **If** we could actually see the path described by a particle, such as a sand grain in the rock, it would be more like that of a bluebottle buzzing round the room; it would be up and down, to and fro and from side to side.

『 **path** n. line along which sb./sth. moves (人或事物移动的) 路线, 轨道 』

- the moon's **path** round the earth
- the **path** of a tornado
- Scientists used advanced imaging to trace **the path** described by a photon. 科学家们使用先进的成像技术来追踪一个光子所描述的路径。

『 **grain** n. [C] a single very small piece of a substance such as sand or salt 小颗粒 』

- The recipe only calls for **a grain of salt** to enhance the flavor of the chocolate. 食谱只需要一粒盐来提升巧克力的风味。
- Even **a grain of sand** in your eye can cause significant discomfort. 哪怕是一粒沙子进到眼里, 也会让你感到非常不适。
- There wasn't **a grain of sugar** left in the jar after she finished baking the cake. 她做完蛋糕后, 罐子里连一粒糖都不剩了。

『 **bluebottle** n. large buzzing fly with a blue body 青蝇 』

- We could see a **bluebottle** on the rock. 我们能看见一只绿头苍蝇在岩石上。
- A **bluebottle** buzzed around the garbage bin. 一只蓝蝇在垃圾桶周围嗡嗡作响。
- The picnic was ruined by the presence of several **bluebottles**. 几只蓝蝇的出现毁了这次野餐。

『 **buzz** v. to make a continuous sound, like the sound of a bee 发出嗡嗡声 』

- The city has a real **buzz**. 这个城市真热闹。
- **A low buzz of** admiration swept through the assemblage. 一阵表示敬佩的低沉的赞赏声在聚集的人群中传开。
- **A buzz of** excitement filled the courtroom as the defendant was led in. 被告被带进来时, 法庭内充满激动的嘈杂声。

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※ Instruments have been devised and can be so placed that all three elements can be recorded in different graphs.

『 **element** n. one part or feature of a whole system, plan, piece of work etc., esp. one that is basic or important 要素, 重要部分 』

- Honesty is a vital **element** of her success.

- Besides ability, the other essential **element** in political success is luck.
- There is **an element of** subjectivity in her criticism. 她的批评有主观因素。

『 **graph** n. a picture that uses lines or curves to show the relationship between numbers or measurements that change 图, 图表, 曲线图 』

- A bar **graph** will show you the busy and quiet times during the week. 柱状图会显示一周中繁忙和平静的时间段。
- I first saw a **graph** similar to this one in a software magazine article. 我在一篇软件杂志的文章中第一次看到与此类似的图。
- We plotted about eight points on the **graph**. 我们在图表上绘出了大约有八个点的曲线。

## 波动传导方式 难度: 3 级

※ **When the instrument is situated at more than 700 miles from the earthquake centre, the graphic record shows three waves arriving one after the other at short intervals.**

『 **one after the other = one after another** used to talk about a series of similar things or events 一个接一个地 』

- I'll eat chocolates **one after the other** until the box is finished.
- Small businesses have been collapsing **one after another**.

『 **interval** n. (时间上的) 间隔; (空间上的) 间距 』

- at weekly / 20 minute **intervals**
- The trains run at hourly **intervals**.
- The trees were planted at 20 meter **intervals**.
- But suppose the earth could be covered with sensors spaced one foot apart, rising at one-foot **intervals** all the way to the top of the atmosphere.
- Indeed, it may well be that those whose work is their pleasure are those who most need the means of banishing it **at intervals** from their minds.
- There was a short **interval** of peace before the noise started again. 在噪音再次开始前, 有一段短暂的宁静。
- The security camera took pictures **at short intervals** throughout the night. 这台安全摄像机整晚都以短间隔拍照。

**at ... intervals** 每隔... (时间或空间)

The lamp posts were placed **at regular intervals** along the road. 路灯沿路每隔一段距离设置一盏。

※ **The first records the arrival of longitudinal vibrations.**

『 records the arrival of 记录...的到达 』

- The first records the arrival of longitudinal vibrations. 第一个记录了纵向振动的到达。
- The sensor records the arrival of the first seismic activity. 传感器记录了首次地震活动的到达。

『 longitudinal vibrations 纵向振动 』

- The results show that **longitudinal vibration of drill** string is relative to rotary speed and weight on bit (WOB). 实验结果表明，钻柱的纵向振动主要与转速和钻压有关。
- The expression format and application method of **longitudinal vibration** road spectrum were described. 建立了纵振动力学模型，阐述了纵振路面谱的表达形式及应用方法。
- In this paper, the regularity of **longitudinal vibration** was analyzed by using finite element method. 本文利用有限元方法分析了钻柱轴向振动规律。

**transverse vibrations** 横  
向振动

The second marks the arrival of transverse vibrations. 第二个标  
志着横向振动的到达。

※ The second **marks** the arrival of transverse vibrations which travel  
more slowly and **arrive** several minutes after the first.

『 mark the arrival of 标志着...的到达 』

- The loud whistle **marks the arrival of** the express train. 响亮的汽笛声标志着特快列车的到达。
- The snow **signalled** the arrival of a front, and a high-pressure area seemed to be settling in. 降雪标志了一个锋面的到来，一个高压区似乎正在进入本地。
- With **the arrival of spring**, the refugees will be moved again. 随着春天的到来，难民们将再次被转移。

※ These two **have travelled** through the earth.

『 through the earth 贯穿地球（传播） 』

- I want to dig a hole all the way **through the earth!** 我想挖一个贯穿地球的洞。
- I wonder if I shall fall right **through the earth!** 我想知道我会不会正好穿过地球掉下去！
- The deep-sea currents have **travelled through** the ocean basins for millennia. 深海洋流穿过洋盆传播了数千年。

※ **It was** from the study of these **that** so much **was learnt** about the  
interior of the earth.

『 interior n. the inner part or inside of something 内部，里面 』

- The **interior** of the church was dark.
- a house with a classical **exterior** and a modern **interior**

※ The third, or main wave, is the slowest and has travelled round the earth through the surface rocks.

『 or conj. (introducing a word or phrase that explains, or means the same as, another 表示一词语对另一词语的解释关系或为其同义词语) 即, 亦即, 或者说 』

- a kilo, **or** two pounds
- geology, **or** the science of the earth's crust
- **Cave exploration, or pot-holing, as it has come to be known, is a relatively new sport.**



see eye to eye

见解一致, 看法相同

课后练习题 (解题方法与答案需要在“ncego.com”笔记官网查看)

1. W: Did Linda ever finish that introductory chapter? M: I'm not sure. She's spent hours on end rewriting it. Q: What does the man imply about Linda? (单选)
- A、 She rearranged the chapters of her book.
  - B、 She assured him that the chapter was finished.
  - C、 She worked on the chapter for quite a while.
  - D、 She wasn't sure how to end the book.

请发送邮件至: [hibenba@gmail.com](mailto:hibenba@gmail.com) 或通过 ([ncego.com](http://ncego.com)) 页面底部“举报错误”。

一场孤独的修行, 需要相信积累的力量。专注当下、珍惜时间、顶峰相见。