

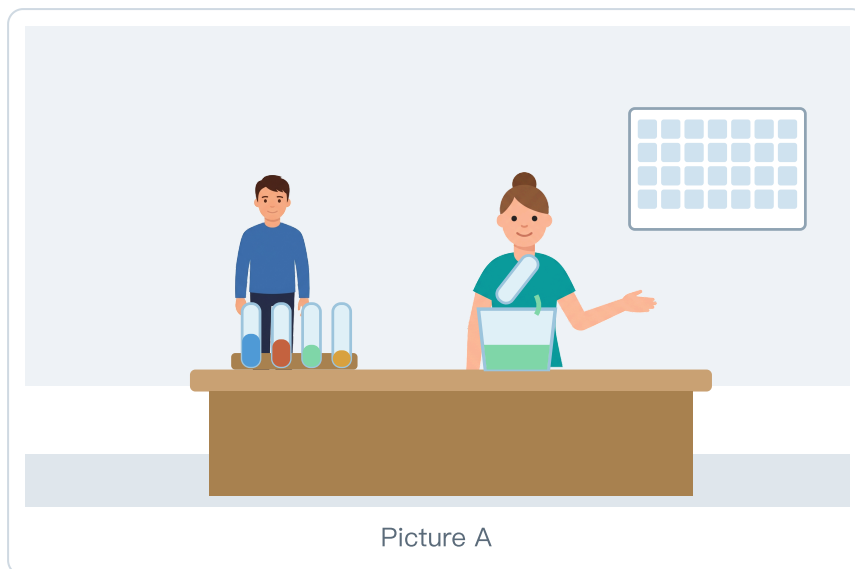
中級聽力測驗 單字第 26 回 科學與實驗 教師用 (含錄音稿・答案・詳解)

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答案一覽

1	2	3	4	5	6	7
D	C	C	A	A	B	C
8	9	10	11	12	13	14
C	B	C	A	D	C	B
15	16	17	18	19	20	21
A	B	A	D	C	B	D
22	23	24	25	26	27	28
C	D	D	C	D	A	B
29	30	31	32	33	34	35
D	A	B	B	D	B	C

第 1 部分 看圖辨義 Picture Description



Picture A

For questions number one and two, please look at picture A.

1. Where are these two people? 答案 D

這兩個人在哪裡？

- A. In a cabin. 在小木屋。
- B. In a van. 在廂型車裡。
- C. In a mansion. 在大宅。
- D. In a laboratory. 在實驗室。**

詳解 | 有燒杯、試管架與白袍，是實驗室。laboratory（實驗室）是主題字；cabin、mansion、van 都是本回單字。

2. What is the woman doing? 答案 C

那位女子在做什麼？

- A. Boiling a kettle. 燒水壺。
- B. Knitting. 織東西。
- C. Pouring liquid into a beaker. 把液體倒進燒杯。**
- D. Eating a pancake. 吃鬆餅。

詳解 | 女子正把試管裡的液體倒入燒杯。experiment（實驗）是主題字；kettle、pancake、knit 都是誘答。

Laboratory Rules	
At all times	Eye protection
Long hair	Tied back
Bags	Under the bench
If you spill	Tell a teacher
No food or drink in the laboratory.	

Picture B

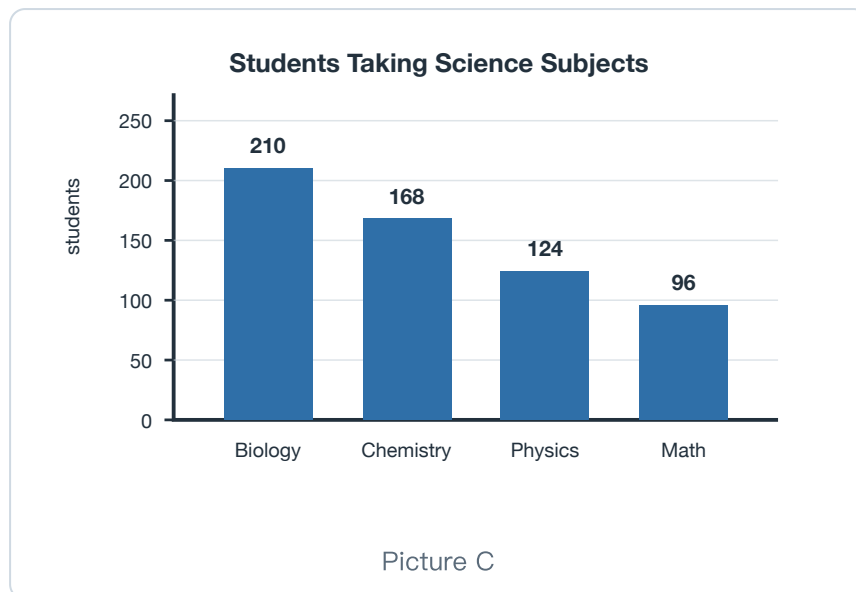
For question number three, please look at picture B.

3. According to the sign, what must be worn in the laboratory? **答案 C**

根據看板，實驗室裡必須配戴什麼？

- A. Gloves only. 只要手套。
- B. Nothing. 不用配戴。
- C. Eye protection.** 護目裝備。
- D. A hat. 帽子。

詳解 | 看板第一條是 Eye protection at all times。laboratory 是主題字。



For question number four, please look at picture C.

4. Looking at the chart, which subject has the most students? **答案 A**

看這張圖表，哪一科學生最多？

- A. **Biology.** 生物。
- B. Chemistry. 化學。
- C. Physics. 物理。
- D. Math. 數學。

詳解 | 圖中 Biology 210 最高。chemistry (化學)、physicist (物理學家) 都是主題字。

Today's Experiment

- | | |
|--------|-------------------------|
| Step 1 | Heat the liquid |
| Step 2 | Record the temperature |
| Step 3 | Add the powder |
| Step 4 | Observe for ten minutes |

Picture D

For question number five, please look at picture D.

5. Looking at the notice, what is step two of the experiment? **答案 A**

看這張告示，實驗的第二步是什麼？

- A. Record the temperature. 記錄溫度。
- B. Add the powder. 加入粉末。
- C. Heat the liquid. 加熱液體。
- D. Wash the tubes. 清洗試管。

詳解 | 告示上 Step 2 是 Record the temperature。experiment、observation 都是主題字。

第 2 部分 問答 Question Response

W: What did the experiment show?

那個實驗顯示了什麼？

6. **答案 B**

- A. The cock crowed by the cabin. 公雞在小木屋旁啼叫。
- B. That heat changes the color. 熱會改變顏色。
- C. They inspected a pea in the ditch. 他們檢查了水溝裡的一顆豌豆。
- D. An impressive state of organic farming. 令人印象深刻的有機農業狀態。

詳解 | experiment (實驗) 是主題字。impressive、state、organic、cock、cabin、inspect、pea、ditch 都是誘答。

M: Is there any proof for that theory?

那個理論有任何證據嗎？

7. 答案 C

A. This paradise is tough and cunning. 這座樂園既艱難又狡猾。

B. His objection was vain. 他的反對是徒勞的。

C. Two studies, both small. 兩份研究，規模都小。

D. The recorder won an award in a van. 那台錄音機在廂型車裡得了獎。

詳解 | proof (證據)、theory (理論) 都是主題字。recorder、award、van、paradise、tough、cunning、objection、vain 都是誘答。

W: Who devised this method?

是誰想出這個方法的？

8. 答案 C

A. They defeated the team and portrayed the characteristic. 他們擊敗了那支隊伍並描繪了那項特徵。

B. Destruction followed, but we were fortunate. 破壞隨之而來，但我們很幸運。

C. A chemist in the nineteen twenties. 一位一九二〇年代的化學家。

D. The enlargement helped him concentrate. 放大之後幫助他專心。

詳解 | devise (想出)、chemist (化學家) 都是主題字。destruction、fortunate、defeat、portray、characteristic、enlargement、concentrate 都是誘答。

M: What evidence do we have so far?

目前我們有什麼證據？

9. 答案 B

A. The kettle boiled while she renewed the license. 水壺燒開時她去換發了執照。

B. Photographs and two samples. 照片與兩份樣本。

C. The jury used a plural form. 陪審團用了複數形式。

D. A punctual guest waltzed into the mansion. 一位準時的客人跳著華爾茲走進大宅。

詳解 | evidence (證據) 是主題字。kettle、renew、jury、plural、punctual、waltz、mansion 都是誘答。

W: How small is an atom, really?

原子到底有多小？

10. 答案 C

A. Their partnership ended in a narrow passage. 他們的合夥關係在一條窄廊裡結束。

B. Stars twinkle above the setup. 星星在那套裝置上方閃爍。

C. Too small for any light microscope. 小到任何光學顯微鏡都看不到。

D. Her statement mentioned pancakes, particularly. 她的聲明特別提到了鬆餅。

詳解 | atom (原子) 是主題字。twinkle、setup、statement、pancake、particularly、partnership、passage 都是誘答。

M: What did you observe during the test?

測試期間你觀察到什麼？

11. 答案 A

A. The liquid turned cloudy after ten minutes. 液體十分鐘後變混濁。

B. Her personality suits photography. 她的個性適合攝影。

C. Not one penny of postage was paid. 一便士的郵資都沒付。

D. A passive traveler lost his passport. 一位消極的旅人弄丟了護照。

詳解 | observe (觀察)、observation 都是主題字。passive、passport、penny、postage、personality、photography 都是誘答。

W: Is this formula still used today?

這個公式今天還在用嗎？

12. 答案 D

A. The poisonous plant left him powerless. 那株有毒植物讓他無力。

B. A lily accompanied the leak. 一朵百合伴隨著那個漏洞。

C. The inspector tapped the pole and knitted. 檢查員敲了敲杆子然後織起東西。

D. Yes, in every textbook. 還在用，每本教科書都有。

詳解 | formula (公式) 是主題字。poisonous、powerless、inspector、tap、pole、knit、lily、accompany、leak 都是誘答。

M: Why is this invention so important?

這項發明為什麼這麼重要？

13. 答案 C

A. A creature, a sausage and a clown arrived. 一隻生物、一根香腸和一個小丑到了。

B. The bride glowed with bare arms. 新娘光著手臂容光煥發。

C. It made the process ten times cheaper. 它讓製程便宜了十倍。

D. Harm came to the tribe last winter. 去年冬天那個部落受到了傷害。

詳解 | invention (發明) 是主題字。creature、sausage、clown、bride、glow、bare、harm、tribe 都是複習字誘答。

W: Is the problem technical or scientific?

這個問題是技術性的還是科學性的？

14. 答案 B

A. The physicist's paradise defeated the jury. 那位物理學家的樂園擊敗了陪審團。

B. Technical. The theory is fine. 技術性的，理論沒問題。

C. An atomic cock inspected the organic ditch. 一隻原子公雞檢查了那條有機水溝。

D. Renew the plural evidence particularly. 特別要延長那份複數的證據。

詳解 | technical (技術的)、scientific (科學的)、theory (理論) 都是主題字。其餘選項語意不通，用來複習其他單字。

M: Was the result experimental or final?

那個結果是實驗性的還是最終的？

15. 答案 A

A. Experimental — we repeat it next month. 實驗性的——下個月會再做一次。

B. Concentrate on the postage in the cabin. 專心處理小木屋裡的郵資。

C. The award for photography was vain. 攝影獎是虛榮的。

D. A tough chemist portrayed the twinkling setup. 一位堅強的化學家描繪了那套閃爍的裝置。

詳解 | experimental (實驗性的) 是主題字。其餘選項用來複習 tough、chemist、portray、twinkle、setup、award、photography、vain、concentrate、postage、cabin。

第 3 部分 簡短對話 Short Conversations

M: The experiment failed for the third time.
實驗第三次失敗了。

W: Same step each time?
每次都卡在同一步嗎？

M: Yes, always when we add the powder.
對，都是加入粉末的時候。

16. When does the experiment fail? **答案 B**

實驗何時失敗？

- A. At the start. 一開始。
- B. When the powder is added. 加入粉末時。**
- C. At the end. 最後。
- D. When it is heated. 加熱時。

詳解 | experiment (實驗) 是主題字。

W: Is the laboratory free this afternoon?
實驗室今天下午空著嗎？

M: From three, after the class leaves.
三點以後，等那班學生離開。

W: I'll book it from three to five.
那我訂三點到五點。

17. When will the woman use the laboratory? **答案 A**

女子何時使用實驗室？

- A. Three to five. 三點到五點。**
- B. Morning. 早上。
- C. One to three. 一點到三點。
- D. All day. 整天。

詳解 | laboratory (實驗室) 是主題字。

M: Your observation notes are very clear.

你的觀察紀錄很清楚。

W: I write them straight after each test.

我每次測試後馬上寫。

M: That's why they're useful.

難怪這麼有用。

18. Why are the notes clear? 答案 D

為什麼紀錄很清楚？

- A. She copies a template. 她照範本抄。
- B. A teacher checks them. 有老師檢查。
- C. She types them. 她用打字的。
- D. She writes them immediately.** 她馬上就寫。

詳解 | observation (觀察) 是主題字。

W: Do we have enough evidence to publish?

我們的證據夠發表嗎？

M: Not yet. One more year of data.

還不夠，還要一年的資料。

W: Then let's keep collecting.

那就繼續收集。

19. What is needed before publishing? 答案 C

發表前還需要什麼？

- A. More money. 更多經費。
- B. A new theory. 新理論。
- C. One more year of data.** 再一年的資料。
- D. A bigger laboratory. 更大的實驗室。

詳解 | evidence (證據) 是主題字。

M: The physicist gave a talk on atomic energy.

那位物理學家做了原子能的演講。

W: Was it too technical?

太專業了嗎？

M: Surprisingly clear, actually.

其實出乎意料地清楚。

20. What did the man think of the talk? 答案 B

男子覺得那場演講如何？

A. Boring. 無聊。

B. Clear and easy to follow. 清楚好懂。

C. Too short. 太短。

D. Too technical. 太專業。

詳解 | physicist、atomic、technical 都是主題字。

W: Who devised this new test?

這個新測驗是誰想出來的？

M: A team in Taipei, last spring.

去年春天台北的一個團隊。

W: And it's already in use?

而且已經在用了？

21. When was the test devised? 答案 D

這個測驗何時被想出來？

A. This spring. 今年春天。

B. Last winter. 去年冬天。

C. Two years ago. 兩年前。

D. Last spring. 去年春天。

詳解 | devise (想出) 是主題字。

Science Conference – Sessions

Session	Time	Field
Atoms and Energy	09:00	Physics
Lab Safety	10:30	General
Organic Chemistry	13:30	Chemistry
Physics Today	15:00	Physics

M: Which session should I attend on chemistry?

化學方面我該參加哪一場？

W: Look at the conference program.

看研討會的議程。

M: I arrive at eleven, so nothing earlier.

我十一點才到，早於這個時間的都不行。

22. Which session will the man attend? **答案 C**

男子會參加哪一場？

A. Atoms and Energy. 原子與能量。

B. Physics Today. 今日物理。

C. Organic Chemistry. 有機化學。

D. Lab Safety. 實驗室安全。

詳解 | 表中十一點後的化學場次是 Organic Chemistry (13:30)。chemistry、atom 都是主題字。

W: This formula gives a different answer.

這個公式算出不一樣的答案。

M: Check the units first.

先檢查單位。

W: Ah – grams, not kilograms.

啊——是公克，不是公斤。

23. What was the mistake? **答案 D**

錯在哪裡？

A. The calculator. 計算機。

B. The formula. 公式。

C. The temperature. 溫度。

D. The units. 單位。

詳解 | formula (公式) 是主題字。

M: Is this invention already patented?

這項發明已經申請專利了嗎？

W: Filed last month, not granted yet.

上個月送件，還沒核准。

M: So we should keep it quiet.

那我們該保密。

24. What is the situation with the patent? **答案 D**

專利的狀況是什麼？

A. Refused. 被駁回。

B. Granted. 已核准。

C. Not filed. 尚未送件。

D. Filed but not granted. 已送件但未核准。

詳解 | invention (發明) 是主題字。

Class Experiments

Experiment	Time needed	Gas burner
Experiment A	40 min	Yes
Experiment B	70 min	No
Experiment C	45 min	No
Experiment D	50 min	Yes

W: Which experiment can we finish in one lesson?

哪個實驗一堂課能做完？

M: The times are on the sheet.

時間都在這張表上。

W: We have fifty minutes, and no gas burner.

我們有五十分鐘，而且沒有瓦斯燈。

25. Which experiment will they do? **答案 C**

他們會做哪個實驗？

- A. Experiment A. 實驗 A。
- B. Experiment B. 實驗 B。
- C. Experiment C. 實驗 C。**
- D. Experiment D. 實驗 D。

詳解 | 表中 ≤ 50 分鐘且不需瓦斯燈的是 Experiment C。experiment 是主題字。

第 4 部分 簡短談話 Short Talks

M: Before you enter the laboratory, listen to these rules. Eye protection must be worn at all times, even when you are only watching. Long hair must be tied back, and bags go under the bench, never in the aisle. If you spill any liquid, do not wipe it yourself; tell a teacher, who will decide what to use. At the end, wash your hands before you touch your phone, not after. Most accidents here happen in the last five minutes, when people hurry. 進入實驗室前請聽這些規定。護目裝備必須全程配戴，即使你只是在旁邊看。長髮必須綁起來，背包放在實驗桌下，絕不要放在走道。若打翻任何液體，不要自己擦；告訴老師，由老師決定用什麼處理。結束時請先洗手再碰手機，不要反過來。這裡多數意外發生在最後五分鐘，也就是大家趕時間的時候。

26. What must students do with long hair? 答案 D

長髮的學生必須怎麼做？

- A. Cover it with a cap. 用帽子蓋住。
- B. Cut it. 剪掉。
- C. Wash it first. 先洗過。
- D. Tie it back. 綁起來。**

詳解 | Long hair must be tied back。laboratory 是主題字。

27. What should you do if you spill liquid? 答案 A

打翻液體該怎麼做？

- A. Tell a teacher. 告訴老師。**
- B. Wash it with water. 用水沖。
- C. Wipe it quickly. 快點擦掉。
- D. Leave the room. 離開教室。

詳解 | tell a teacher, who will decide what to use。

28. When do most accidents happen? 答案 B

多數意外何時發生？

- A. At the start. 一開始。
- B. In the last five minutes. 最後五分鐘。**
- C. In the middle. 中間。
- D. During cleaning. 清潔時。

詳解 | in the last five minutes, when people hurry。

W: I want to explain why one experiment is never enough. A single result can look convincing and still be wrong, because chance alone produces surprising numbers now and then. That is why we repeat the work, and why other laboratories repeat it too. If a result cannot be produced twice, it is not evidence; it is a story. A good scientist is therefore less interested in a striking finding than in a finding that keeps coming back. 我想說明為什麼一次實驗永遠不夠。單一結果看起來可能很有說服力卻仍然是錯的，因為光靠機率偶爾就會產生令人驚訝的數字。這就是我們要重複實驗、也要讓其他實驗室重複的原因。若一個結果無法被做出第二次，它就不是證據，而是故事。因此好的科學家對驚人的發現不那麼感興趣，反而更在意一再重現的發現。

29. Why can a single result be wrong? 答案 D

為什麼單一結果可能是錯的？

- A. The equipment is old. 設備老舊。
- B. Scientists lie. 科學家說謊。
- C. The theory is new. 理論很新。
- D. Chance produces surprising numbers. 機率會產生令人驚訝的數字。**

詳解 | chance alone produces surprising numbers。experiment 是主題字。

30. What is not evidence, according to the speaker? 答案 A

講者認為什麼不算證據？

- A. A result that cannot be repeated. 無法重現的結果。**
- B. A repeated result. 可重複的結果。
- C. A large number. 很大的數字。
- D. A published paper. 已發表的論文。

詳解 | If a result cannot be produced twice, it is not evidence。evidence 是主題字。

31. What does a good scientist value most? 答案 B

好的科學家最重視什麼？

- A. A striking finding. 驚人的發現。
- B. A finding that keeps coming back. 一再重現的發現。**
- C. A famous name. 名氣。
- D. A fast result. 快速的結果。

詳解 | a finding that keeps coming back。scientific 是主題字。

M: The story of this invention is not what people expect. The chemist who is remembered for it was not the first to make the substance; a physicist had produced a little of it eight years earlier but saw no use for it and wrote three lines about it in a journal. What the chemist did was to devise a cheap way of making it in quantity. The lesson is that in science, being first and being useful are often two different achievements.

這項發明的故事和大家想的不一樣。因它而被記住的那位化學家並不是第一個做出這種物質的人；一位物理學家在八年前就製造過少量，但看不出用途，只在期刊上寫了三行。那位化學家做的，是想出一種便宜的大量製造方法。教訓是：在科學裡，率先做到與做得有用，往往是兩種不同的成就。

32. Who first produced the substance? **答案 B**

誰最先製造出這種物質？

- A. The chemist. 那位化學家。
- B. A physicist. 一位物理學家。**
- C. A student. 一位學生。
- D. Nobody knows. 沒人知道。

詳解 | a physicist had produced a little of it eight years earlier。chemist、physicist 都是主題字。

33. What did the chemist actually do? **答案 D**

那位化學家實際上做了什麼？

- A. Sold it. 販售它。
- B. Named it. 為它命名。
- C. Discovered it. 發現它。
- D. Devised a cheap way to make a lot of it. 想出便宜的大量製造方法。**

詳解 | devise a cheap way of making it in quantity。devise、invention 都是主題字。

34. What is the speaker's point? **答案 B**

講者的重點是什麼？

- A. Being first is everything. 搶第一就是一切。
- B. Being first and being useful differ. 率先與有用是兩回事。**
- C. Journals are unreliable. 期刊不可靠。
- D. Chemists work harder. 化學家比較努力。

詳解 | being first and being useful are often two different achievements。

Results – Gas Produced

Sample	Temperature	Time to react	Gas
A (control)	20°C	–	None
B	40°C	12 min	18 ml
C	50°C	6 min	34 ml
D	70°C	9 min	11 ml

W: Please look at the printed results table while I explain what we found. Notice that the highest temperature did not give the fastest reaction; sample C, at the middle temperature, was quickest. Sample D was heated most but produced the least gas, which suggests something breaks down above sixty degrees. Sample A is our control and should be ignored when you compare speeds. We will repeat the whole set next week before drawing any firm conclusion.

我說明結果時請看印出的表格。請注意最高溫並沒有帶來最快的反應；中溫的樣本 C 最快。樣本 D 加熱最多，產生的氣體卻最少，這顯示某種物質在六十度以上會分解。樣本 A 是對照組，比較速度時應予忽略。下週我們會重做整組實驗，之後才下確定結論。

35. According to the table and the talk, which sample reacted fastest? **答案 C**

根據表格與談話，哪個樣本反應最快？

- A. Sample A. 樣本 A。
- B. Sample B. 樣本 B。
- C. Sample C. 樣本 C。**
- D. Sample D. 樣本 D。

詳解 | 錄音提到 sample C, at the middle temperature, was quickest，中溫的那個樣本反應最快。experiment、observation 都是主題字。