

1a. Note-Taking: 善用圖像符號或縮寫:

at		Number		that is	
and		about, approximately		someone	
because		so, therefore, thus		compare	
positive, and, also, more than		Negative		against	
increase, grow, gain		decrease, loss, down		and so on	
leads to, cause, then, become, got to		uncertain, possible		without, not	
change		yes, correct		Contrast	
less than, smaller than		more than, larger than		Very	

示範題:

Narrator: Listen to a teacher talking during a life science class.

Man: Why did the dinosaurs of 65 million years ago disappear? The cause of their disappearance remains a mystery. However, scientists have suggested a number of theories, the first among which is the gradual climate-change theory. Many scientists believe that **gradual change in the climate** best explains why the **dinosaurs died out**. Over millions of years, the **climate** of the world became **cooler**. As a result, **plants** began to **disappear**. The change in climate caused a severe shortage of food, especially the plants that dinosaurs depended on for their food supply.

例: **What happened to dinosaurs' food source?**

- (a) They were all eaten up.
- (b) They became cooler.
- (c) They died out with dinosaurs.
- (d) They slowly disappeared over time.

首先閱覽題目，搜索關鍵字得知要注意聽「恐龍食物來源」的下場，然後邊聽，邊結合筆記。例如，先利用縮寫法把單字簡化，因此 dinosaurs = dinos, climate = clim。再來結合圖像符號或縮寫，如 because = ∴, become = →, as a result = ∴。此外，也可以利手中文將單字簡化，如 disappear = 失，如此一來考生所做的重點筆記可能就會像是：

dinos extinct ∴ plnt clim change, Clim → cooler ∴ plants 失

然後，排除掉陷阱選項，例如(B)的 "cooler" 或是(C)的 "died out" 雖然同樣出現在聽力內文。但卻不符合文意，故答案為(D)。

1b. Listening: 比對式筆記

Key Concept(觀點)	Ex(例證) 或 Contrasting Concept(反向觀點)
Intro(開頭):	
Feature 1(特點 1):	
Feature 2(特點 2):	
Feature 3(特點 3):	
St Q(學生問題):	
Prof Ans(教授回答):	

1c. Tests: 答題技巧

<p>Question 1 of 6 主旨題</p> <p>What does the professor mainly discuss?</p> <p>Ⓐ Comparisons between land animals and ocean-going animals of the Mesozoic era</p> <p>Ⓑ Comparisons between sauropods and modern animals</p> <p>Ⓒ Possible reasons why sauropods became extinct</p> <p>Ⓓ New theories about the climate of the Mesozoic era</p>	<p>Question 2 of 6 細節題</p> <p>What point does the professor make when she compares blue whales to large land animals?</p> <p>Ⓐ Like large land animals, blue whales have many offspring.</p> <p>Ⓑ Like large land animals, blue whales have proportionally small stomachs.</p> <p>Ⓒ The land environment provides a wider variety of food sources than the ocean.</p> <p>Ⓓ The ocean environment reduces some of the problems faced by large animals.</p>
<p>Question 3 of 6 細節題</p> <p>According to the professor, what recent finding about the Mesozoic era challenges an earlier belief?</p> <p>Ⓐ Sauropod populations in the Mesozoic era were smaller than previously believed.</p> <p>Ⓑ Oxygen levels in the Mesozoic era were higher than previously believed.</p> <p>Ⓒ Ocean levels in the Mesozoic era fluctuated more than previously believed.</p> <p>Ⓓ Plant life in the Mesozoic era was less abundant than previously believed.</p>	<p>Question 4 of 6 細節題</p> <p>Compared to small animals, what disadvantages do large animals typically have?</p> <p>Ⓐ Large animals require more food.</p> <p>Ⓑ Large animals have fewer offspring.</p> <p>Ⓒ Large animals use relatively more energy in digesting their food.</p> <p>Ⓓ Large animals have greater difficulty staying warm.</p>
<p>Question 5 of 6 目的功能題</p> <p>Why does the professor discuss gastroliths that have been found with sauropod fossils?</p> <p>Ⓐ To show that much research about extinct animals has relied on flawed methods</p> <p>Ⓑ To show that even an incorrect guess can lead to useful research</p> <p>Ⓒ To give an example of how fossil discoveries have cast doubt on beliefs about modern animals</p> <p>Ⓓ To give an example of a discovery made possible by recent advances in technology</p>	<p>Question 6 of 6 細節題</p> <p>What did researchers conclude from their study of sauropods and gastroliths?</p> <p>Ⓐ That gastroliths probably helped sauropods to store large quantities of plant material in their stomachs</p> <p>Ⓑ That sauropods probably used gastroliths to conserve energy</p> <p>Ⓒ That sauropods may not have used gastroliths to aid in their digestion</p> <p>Ⓓ That sauropods probably did not ingest any stones</p>

1d. Listening: 範例筆記

Key Concept(觀點)	Ex(例證) 或 Contrasting Concept(反向觀點)
Intro(開頭): dinosaur fossils from the Mesozoic era: the sauropods	
Feature 1(特點 1): will illustrate what we can learn by comparing the fossil record to modern animals.	sauropods weighed up to 100 tons-20 times as much as elephants.
Feature 2(特點 2): sauropods shouldn't have been successful. The largest animals today don't live on land, but in the ocean, where food's easier to find.	A blue whale can eat up to 8,000 pounds of food a day... and they give birth only once every few years.... large animals can't easily get rid of excess body heat... for a 100-ton land animal, it can be a problem.
Feature 3(特點 3): For years we've assumed it was the abundant plant life of the Mesozoic that allowed these giants to thrive.	oxygen levels were much lower in the Mesozoic than we'd assumed, there was much less plant life for sauropods to eat than we'd thought.
St Q(學生問題): how much can we actually learn, looking at some ancient bones	compared to all we can learn from modern animals, it just seems...more like guessing.
Prof Ans(教授回答): A hypothesis-a type of "guess"-is made...	Lots of modern animals swallow stones... stones that're used to help grind up the food
we "test" the hypothesis, by looking for evidence to support it	for years, we thought these were gastroliths-they were found in the area of the sauropods' stomachs.
then some questions are answered, which may lead to new questions	the study ostriches need to ingest about 1% of their total body weight in gastroliths. But the stones found with sauropods total much less proportionally. we're not quite sure what these sauropod stones were used for.

2a. Writing & Speaking

Desc	Key Words
<p>旁白：(○聽一段)(○動物學的)(○課程)。</p> <p>NARRATOR: (①____) (②____) (③____).</p>	<p>zoology [zo`alədʒɪ] 動物學</p>
<p>女教授：(○你們)(○今天的)(○閱讀內容)(○涉及)(○中生時期的)(○恐龍化石)……(○中生時期)(○大約在 6500 萬年前)(○結束)。(○今天，我們將要討論蜥腳類動物)。</p> <p>FEMALE PROFESSOR: (①____) (②____) (③____) (④____) (⑤____) (⑥____) ... (⑦____) (⑧____) (⑨____) (⑩____).</p>	<p>Fossil[`fas!]化石, Mesozoic [mesə`zoɪk] 中生代, era [ˈɪrə] 時代, sauropod[ˈsɔərəpəd] 蜥腳類動物</p>
<p>(○我認為), (○我們)(○對蜥腳類動物的)(○討論)(○將說明)(○我們, 可以)(○通過)(○將化石記錄與現代動物)(○進行比較)(○來學到)(○什麼)。</p> <p>(①____) (②____) (③____) (④____) (⑤____) (⑥____) (⑦____) (⑧____) (⑨____) (⑩____) (⑪____).</p>	<p>modern [ˈmɑdən] 現代的</p>
<p>(○"化石")(○是指)(○史前動物的)(○遺跡)——(○例如)(○被礦化的)(○骨頭)……(○或)(○被留在石頭上)(○骨頭或器官的)(○印記)。</p> <p>(①____ "____") (②____) (③____) (④____)-(⑤____) (⑥____), (⑦____) ... (⑧____) (⑨____) (⑩____) (⑪____)...</p>	<p>prehistoric [prihɪs`tɔrɪk] 史前的, mineralize[ˈmɪnrəlaɪz] 使礦化, impression 印記</p>
<p>(○目前, 蜥腳類動物是)(○有史以來存在過)(○最大的動物)(○之一)。(○它們)(○比藍鯨)(○還要大), (○而藍鯨是)(○當今)(○現存)(○最大的動物)。(○蜥腳類動物重達 100 噸), (○是大象的)(○20 倍)。</p> <p>(①____, ____) (②____) (③____) (④____, ____). (⑤____) (⑥____) (⑦____), (⑧____) (⑨____) (⑩____) (⑪____); (⑫____)-(⑬____) (⑭____).</p>	<p>alive[əˈlaɪv]活著的</p>

Desc	Key Words
<p>(○並且，它們是非常成功的)(○恐龍)(○種族): (○在化石記錄中)，(○有證據表明)(○蜥腳類恐龍)(○存在異常長的時間)——(○超過 1 億年)。(○所以：為什麼蜥腳類恐龍這麼成功)？</p> <p>(①_____, _____) (②_____) (③____): (④____) (⑤____) (⑥____) (⑦____)-(⑧____).</p> <p>(⑨____: _____)?</p>	<p>sauropod[ˈsɔrəpəd] 蜥腳類動物</p>
<p>(○從生物學上來講)，(○蜥腳類動物不應該成功)。(○大型動物)，(○比如……大象)，(○比如說……它們需要更多的食物和能量)……(○而且)(○與小型動物相比)，(○它們的後代更少)……(○這使得維持種群變得更加困難)。</p> <p>(①_____, _____), (②_____. (③____)-(④____... _____), (⑤____... _____)... (⑥____) (⑦____) (⑧____)... (⑨____).</p>	<p>biologically [baɪəˈlɒdʒɪklɪ] 生物學地， offspring[ˈɒfsprɪŋ] 後代</p>
<p>(○現在)，(○體型最大的動物)(○不生活在陸地上)，(○而是生活在)(○更容易覓)(○食的)(○海洋里)。(○舉個例子)，(○一隻藍鯨)(○一天)(○能吃掉八千磅的食物)，(○而且它們)(○每隔幾年)(○才繁衍一次)。</p> <p>(①____) (②____) (③____), (④____) (⑤____), (⑥____) (⑦____). (⑧____), (⑨____), (⑩____) (⑪____)... (⑫____) (⑬____) (⑭____).</p>	<p>ocean [ˈoʊən] 海洋</p>
<p>(○我們還知道體溫)……(○嗯...大型動物不容易散去多餘體溫)。(○對於遠洋的鯨魚來說)，(○這不是問題)；(○但對於一百噸的陸生生物而言，就會是個問題了)。</p> <p>(①_____-)(②_____, _____)... (③____), (④____); (⑤____, _____).</p>	<p>excess [ɪkˈses] 過量的</p>
<p>(○多年來)，(○我們都以為)，(○是)(○中生代時期的)(○豐富植物生命)(○讓這些巨型動物繁榮起來)。</p> <p>(①____) (②____) (③____) (④____) (⑤____) (⑥____).</p>	<p>Mesozoic [mesəˈzoɪk] 中生代</p>

Desc	Key Words
<p>(○但我們現在知道了)，(○由於)(○中生代的)(○氧氣含量)(○比我們所以為的)(○要低得多)，(○在那時候並沒有)(○我們想像中那麼多的)(○植物供蜥腳類動物食用)。</p> <p>(①_____, _____), (②____) (③_____) (④_____) (⑤_____) (⑥_____) (⑦_____) (⑧_____) (⑨_____).</p>	<p>oxygen [ˈɒksədʒən] 氧氣</p>
<p>(○所以現在……好吧)，(○我們在看其它)——(○我們……我們正——我們正在努力弄明白)(○蜥腳類動物的)(○生物性質)，(○把它們的化石)(○和現代動物的)(○解剖結構)(⑥作比較)，(○以更好地理解它們是怎樣生存的)。</p> <p>(①____... ____), (②_____-)(③_____-) (④_____) (⑤_____), (⑥_____) (⑦_____) (⑧_____) (⑨_____), (⑩_____).</p>	<p>Biology [baɪˈɒlədʒɪ] 生物學, anatomy [əˈnætəmi] 解剖</p>
<p>(○我們發現)，(○蜥腳類動物是)(○儲存能量的)(○專家)。</p> <p>(①_____) (②_____) (③_____) (④_____).</p>	<p>sauropod [ˈsɔːrəpəd] 蜥腳類動物</p>
<p>(○它們有巨大的胃容量)——(○能夠)(○長時間)(○消化食物)……(○以緩慢的速度)(○把食物轉化成能量)——(○「儲存」以備後用)。</p> <p>(①_____-)(②_____) (③_____) (④_____)... (⑤_____) (⑥_____-) (⑦"_____"_____).</p>	<p>enormous [ɪˈnɔːrməs] 巨大的</p>
<p>(○對)(○胃容量小的)(○動物來說)，(○需要大量的能量來不斷尋覓食然後消化食物)……(○有了更大的胃且消化得更慢)，(○你就不需要那麼多能量……約瑟夫)？</p> <p>(①____) (②____) (③____), (④_____)... (⑤_____), (⑥____... _____)?</p>	<p>digestion [dɪˈdʒestʃən] 消化</p>

Desc	Key Words
<p>男學生：(○[恭敬，但不相信])...(○嗯)，(○科學家們真的瞭解蜥腳類動物嗎)，(○從觀察-我是說)，(○和我們)(○能)(○從現代動物身上)(○學到的知識)(○相比)，(○我們究竟)(○能從那些古老的骨頭中)(○學到)(○什麼)？(○且)(○把相隔了幾百萬年的)(○動物放在一起)(○對比)，(○這看起來更像是...靠猜的)。</p> <p>MALE STUDENT: (①[_____, _____]) (②____... ____), (③____ _____), (④____ - ____), (⑤____) (⑥____) (⑦____) (⑧____) (⑨____), (⑩____)...(⑪____) (⑫____) (⑬____)?)... (⑭____) (⑮____) (⑯____) (⑰____) (⑱____-____, _____..._____).</p>	<p>ancient [ˈenʃənt] 古代的</p>
<p>女教授：(○研究已滅絕的動物時)(○總會有一些猜測)；(○但這正是導致了重大發現)：(○提出了)(○一個假說) - (○一種"猜測").....(○我們)(○通過尋找)(○支持它的)(○證據)(○來"檢驗"這個假說).....(○然後有些問題解決了)，(○可能會引發新的問題)。...</p> <p>FEMALE PROFESSOR: (①____) (②____); (③____): (④____)-(⑤____ "____")-(⑥____)...(⑦____) (⑧"____" _____), (⑨____) (⑩____) (⑪____)... (⑫____), (⑬____)...</p>	<p>extinct [ɪkˈstɪŋkt] 滅絕的, hypothesis [haɪˈpəθəsis] 假說</p>
<p>(○舉個例子)，(○讓我們看看其中一組比較).....(○我們知道蜥腳類動物不能咀嚼食物)——(○它們的頭骨表明它們沒有咀嚼肌肉)。(○許多現代動物)——(○如鳥類和爬行動物)——(○也不能咀嚼食物)..... (○它們需要整個吞下去)。</p> <p>(①____): (②____)...(③____)- (④____). (⑤____)-(⑥____)-(⑦____)...(⑧____).</p>	<p>Reptile [ˈreptl̩] 爬行動物</p>

Desc	Key Words
<p>(○但是現代動物)(○對消化食物)(②有個有趣的幫手): (○在食物真正被)(○胃)(○消化)(○之前), (○它們吞下石頭)……(○用來幫助磨碎食物的)(○石頭)……。 (○這些石頭被稱為 "胃石")。</p> <p>(①_____)(②_____)(③_____): (④_____)... (⑤_____)(⑥_____)... (⑦_____)(⑧_____)(⑨_____)(⑩_____). (⑪_____ "_____".)</p>	<p>grind[graɪnd] 磨 , gastrolith[ˈɡæstrəlɪθ] 胃石</p>
<p>(○胃石讓食物更容易被消化), (○本質上就是)(○把食物弄碎), (○就像我們)(○咀嚼時)(○所做的那樣)。</p> <p>(①_____), (②_____)(③_____), (④_____)(⑤_____)(⑥_____).</p>	<p>smash [smæʃ] 粉碎</p>
<p>(○隨著時間的推移), (○動物體內的)(○胃石)(○被磨碎並變得光滑和圓潤).....(○目前, 蜥腳類恐龍化石通常)(○與光滑的石頭一起)(○被發現)。(○多年來), (○我們一直認為這些是胃石)——(○它們看起來就像胃石), (○且是)(○在蜥腳類恐龍的胃部)(○區域)(○發現的)。</p> <p>(①_____), (②_____)(③_____)(④_____)... (⑤_____, _____)(⑥_____)(⑦_____)... (⑧_____), (⑨_____-)(⑩_____), (⑪_____(⑫_____(⑬_____(⑭_____).</p>	<p>ground [graʊnd] 磨碎的</p>
<p>(○最近的一項研究測量了)(○現代動物體內的)(○胃石)——(○駝鳥體內的胃石)……(○研究表明), (○駝鳥需要攝入大約)(○重量達到體重)(○百分之一)(○的胃石)。</p> <p>(①_____)(②_____)(③_____-)(④_____)... (⑤_____(⑥_____(⑦_____(⑧_____(⑨_____).</p>	<p>ostrich[ˈɑːstrɪtʃ] 駝鳥 , ingest [ɪnˈdʒɛst] 攝取</p>

Desc	Key Words
<p>(○但我們已經能夠確定)(○在蜥腳類動物身上)(○發現的)(○石頭)(○總重量)(○所占比例)(○要低得多)……(○低於)(○他們體重的)(○千分之一)。</p> <p>(①_____)(②_____) (③_____) (④_____) (⑤_____) (⑥_____) (⑦_____)... (⑧_____) (⑨_____) (⑩_____).</p>	<p>determine [dɪ'tɜːmɪn] 決定 , proportionally [prə'pɔːʃənəli] 成比例地</p>
<p>(○所以現在), (○我們不太確定)(○這些蜥腳類動物的石頭是用來)(○做什麼的)。</p> <p>(①_____), (②_____) (③_____) (④_____).</p>	<p>sauropod[ˈsɔːrəpəd] 蜥腳類動物</p>
<p>(○可能是)(○它們)(○在蜥腳類動物覓食時)(○被意外攝入)——(○它們沒有真正的用途)。</p> <p>(①_____) (②_____) (③_____) (④_____) - (⑤_____) (⑥_____) (⑦_____) (⑧_____) (⑨_____) (⑩_____).</p>	<p>forage [ˈfɔːrɪdʒ] 搜索糧秣</p>
<p>(○其他研究人員推測), (○蜥腳類動物攝入這些石頭以作為)(○他們需要的)(○一些礦物質)(○來源), (○例如鈣)。</p> <p>(①_____) (②_____) (③_____) (④_____) (⑤_____) (⑥_____) (⑦_____) (⑧_____) (⑨_____) (⑩_____).</p>	<p>speculate [ˈspekjəleɪt] 推測, mineral[ˈmɪnərəl] 礦物, calcium [ˈkælsiəm] 鈣</p>
<p>(○因此, 最初的假說)——(○與蜥腳類動物一起)(○發現的)(○石頭)(○是胃石)——(○儘管沒有證據支持), (○但已經幫助我們提出了新的假說), (○這可能最終會得出答案)。</p> <p>(①_____) (②_____) (③_____) (④_____) (⑤_____) (⑥_____) (⑦_____) (⑧_____) (⑨_____) (⑩_____).</p>	<p>hypothesis [haɪ'pəθəsɪs] 假說</p>