



4

Lab-Grown Meat: To Eat or Not to Eat

Mini-Challenge

Task 1: Weighing the Pros and Cons of Lab-Grown Meat

Task 2: Weighing the Pros and Cons of Designer Babies

本活動內容請見《素養活動手冊》pp. 28–34

Thinking Ahead

1. Watch the video and write T (true) or F (false) before each statement.



Scan and Watch

- F (1) Cultured meat is plant-based, meaning it does not require killing animals for food.
- T (2) In-vitro meat is estimated to have a lower impact on the environment.
- T (3) Whether people can accept a new way to produce the food they eat is one of the challenges that will determine the success of cultured meat.
- F (4) Cultured meat will never ever replace animal meat.

2. Look at the picture below. What's special about this package of beef? What do you think about it?

The sticker on the package says.... I think....



Reading Selection



Normal 52~55
Slow 56~59



課文動畫
課文朗讀



Reading Strategy

• Discussion Essay vs. Argumentative Essay

In this lesson, a discussion essay is written in a neutral tone to provide readers with information.

An argumentative essay, however, is written to convince readers of a certain position held by the author.

Both have an introduction paragraph with positive and negative opinions on a certain issue to attract readers' attention, like the first paragraph of the following essay.

The body, from the second to the third paragraph in the same essay, is filled with pros and cons, analysis for and against the issue.

In the conclusion, a discussion essay reviews the pros and cons, leaving readers space to think.

On the other hand, the author of an argumentative essay will confirm his or her position with a call to action to change the current situation.

Track 52, 56

01

1

Note the Details

1. What rising trend have many start-ups been interested in?

They have been interested in making "lab-grown meat" by taking animal stem cells, changing them into primitive fibers, and combining the fibers to form muscle tissue.

Can you imagine taking a bite of a steak that was grown from a **Petri dish*** instead of on a farm? It may sound like a scene in a sci-fi movie, but this is already a reality! Many **start-ups*** have begun to develop a special new production process in which meat is created by taking animal **stem cells***, changing them into **primitive**¹ **fibers**², and combining the fibers to form muscle **tissue**³. The final product is known as "lab-grown meat," and it's a thought-provoking⁴ recent⁵ trend that is backed by both Bill Gates and agricultural giant Cargill.

Track 53, 57 1 (本段中譯與解析請見T-90.5)

02 The widespread support for producing meat in this way is due to the fact that it holds several **substantial**⁶ advantages compared to more traditional methods.² Firstly, one could argue that traditional or old-fashioned meat production facilities, such as farms or factories, hardly ever **have** the animals' best interests **at heart**.³ Growing meat in a **laboratory**⁷ instead would help eliminate the need for **slaughterhouses*** and the **unethical**⁸ treatment of these animals.⁴ In other words, you could **rest assured** that the so-called lab-grown beef **patty*** on your plate didn't come from a cow that had to endure physical or mental **torment**⁹.⁵ **Better still**, it could help make meat production more

2. Why could growing meat in a lab help make meat production more sustainable?

Traditional meat production process accounts for nearly 15 percent of greenhouse gas emissions. However, growing meat in a lab could reduce emissions up to 96 percent.

4



“

The final product is known as “lab-grown meat.” ”

“

Lab-grown beef patty
on your plate didn't
come from a cow that
had to endure physical
or mental torment. ”



6 (本段解析 6~9 請見T-91)

sustainable. The raising of **livestock**¹⁰ needed to fulfill the current global demand for meat actually **takes a** heavy **toll**¹¹ on the environment. According to **FAO**^{*}, it accounts for nearly 15 percent of **greenhouse gas**^{*} emissions. Experts **estimate**¹² that, by **switching**¹³ to lab-grown meat, emissions could be lowered by up to 96 percent. In addition, many claim it won't just be the environment that benefits. Scientists can actually make lab-grown meat healthier and more nutritious for humans by adding **vitamins**¹⁴ and **minerals**¹⁵ that are not always found in natural meat.

Track 54, 58 1

03 Despite the evident advantages that this new type of **forward-thinking**^{*} food may hold, there are some **concerns**¹⁶ surrounding this meat of tomorrow. For a start, certain studies show that the impact of lab-grown meat could actually have **far-reaching**^{*} negative effects over the

3. Why might man-made meat not taste as appealing as real meat?

Man-made meat lacks naturally occurring connective fat, tissue and bones, which might cause loss in taste and texture.

3 (本段解析 3~7 請見 T-92)

long term. While advocates for lab-grown meat say it can help fight climate change, some research suggests that
 40 maintaining the **infrastructure*** of lab-grown cell cultures also requires significant **quantities**¹⁷ of energy and gas
 4 emissions. Another issue to consider is whether this type of artificial meat is actually healthy and safe for humans to
 5 consume. Although great **in theory**¹⁸, lab-grown meat is
 45 “unnatural,” or “similar to **genetically**¹⁹ **modified*** (GM) food.” Since the **latter**²⁰ sometimes **induces**²¹ **allergic**²²
 6 **reactions**²³ or even leads to more serious health problems like cancer, some people are warning against man-made
 meat for fear that it might have similar side effects. One last
 50 area of concern is the actual taste of lab-grown meat.
 7 Without the naturally occurring **connective*** fat, tissue and bones that are present in real meat, lab-grown meat is
somewhat²⁴ lacking in taste and texture and might thus be



“
 Lab-grown meat is
 “unnatural,” or
 “similar to genetically
 modified (GM)
 foods.” ”

unappealing to most consumers. Presently, more extensive
55 research is thus needed to determine how the flavor and
composition²⁵ of the new meat might be **altered**²⁶ to better
suit²⁷ consumers' tastes.

Track 55, 59 1 (本段中譯與解析請見T-93)

04 Whether we like it or not, lab-grown meat is a rising
trend that could have a long-term impact on a global **scale**²⁸.
60 It might, however, come **at a price**². To ensure that future
foods are both sustainable and healthy, it is therefore
essential for us to conduct more **all-inclusive**^{29*} research
first before we **jump to** any **conclusions**³. For now, all we
can do is **keep a close eye on** this rapidly growing trend as
65 it takes us further and deeper into the unknown.

—Written by Catherine Shih



Reading Strategy

• Facts vs. Opinions

A statement of fact is something that one can prove true or not by evidence. A factual* statement is written in a neutral tone, showing no personal favor or emotion. Authors use facts to convince readers from an objective position.

An opinion is also a statement revealing one's belief or feelings on an issue which cannot be proved with evidence. Opinions are used to make readers empathize* or sympathize* to support a certain idea or actions. Emotions and values are frequent elements in the opinion statement.



Word Bank

factual 事實的

empathize 有同感

sympathize 贊同

Check whether the following sentences are facts or opinions.

Fact or Opinion	Statement
<input checked="" type="checkbox"/> fact <input type="checkbox"/> opinion	Certain <u>studies</u> show that the impact of lab-grown meat could actually have far-reaching negative effects over the long term.
<input type="checkbox"/> fact <input checked="" type="checkbox"/> opinion	Lab-grown meat is somewhat <u>lacking in taste and texture and might thus be unappealing</u> to most consumers.
<input type="checkbox"/> fact <input checked="" type="checkbox"/> opinion	Some people are warning against man-made meat <u>for fear that it might have similar side effects</u> .
<input checked="" type="checkbox"/> fact <input type="checkbox"/> opinion	<u>Experts estimate</u> that, by switching to lab-grown meat, emissions could be lowered by up to <u>96 percent</u> .
<input type="checkbox"/> fact <input checked="" type="checkbox"/> opinion	Many <u>claim</u> it won't just be the environment that benefits.

4

Think and Reflect

1. Given a choice between real meat and lab-grown meat, which would you opt for and why?

I'd opt for... because....

Think about...

trendy
healthy
delicious
moral

2. Do you think it's a good idea for meat grown in a lab to replace real meat? State your reasons.

I think/don't think it's a good idea because....

Think about...

animal rights
health
business and marketing
environment

Graphic Organizer

When making an argument, you are actually making a “claim,” usually a main idea, which is backed up with evidence that supports the idea. Evidence can help you persuade others to agree with your argument. Use the graphic organizer to analyze the issue of lab-grown meat and the arguments for and against it. Complete the organizer with the information from the passage.

Would you eat lab-grown meat?

Question

Introduction

Lab-grown meat is created by taking animal stem cells, ¹ changing them into primitive fibers, and combining the fibers to form muscle tissue.

Arguments

YES

1. It can eliminate the need for ² slaughterhouses and the unethical treatment of these animals.
2. It can make meat production more ³ sustainable and help fight climate change.
3. It is healthier and more ⁴ nutritious.

NO

1. The impact of lab-grown meat could have ⁸ far-reaching negative effects over the long term.
2. It may not be ⁹ healthy and safe for humans to consume.
3. It is ¹⁰ unappealing to most consumers.

Evidence

YES

1. You could rest assured that ⁵ the beef on your plate didn't come from a cow that had to endure physical and mental pain.
2. Switching to lab-grown meat can lower the greenhouse gas emissions by ⁶ up to 96 percent.
3. Scientists can add ⁷ vitamins and minerals to lab-grown meat.

NO

1. Maintaining the infrastructure of lab-grown cell cultures requires ¹¹ significant quantities of energy and gas emissions.
2. It might have side effects, such as allergic reactions, or lead to more serious health problems like cancer.
3. It is lacking in ¹² taste and texture.

Comprehension Practice

Practice A

General
Understanding

- C 1. What is this passage mainly about?
- (A) Ways to find start-ups to invest in.
 - (B) A rapidly growing agricultural trend.
 - (C) The pros and cons of lab-grown meat.
 - (D) The possible side effects of man-made meat.

Key Details

- D 2. Which of the following is NOT an advantage of producing meat from a Petri dish?
- (A) It makes meat production more sustainable.
 - (B) It would lower the number of slaughterhouses.
 - (C) It helps eliminate the cruel treatment of farm animals.
 - (D) It could genetically modify meat to make it more nutritious.

Key Details

- C 3. Why does the lab-grown meat production process require great quantities of energy and gas emissions?
- (A) To help fight climate change.
 - (B) To keep the animals' best interests in mind.
 - (C) To maintain its infrastructure of cell cultures.
 - (D) To alter the flavor and composition of the new meat.

Practice B

Which paragraph indicates the author's attitude toward the future of lab-grown meat? Also, check the adjective that best describes the author's attitude.

(1) Paragraph 4.

(2) ☐ Hopeful. ☐ Amazed. ☒ Cautious. ☐ Pessimistic.

Vocabulary & Phrases



字彙朗讀

Words for Production Track 60~61

1. **primitive**

[ˈprɪmətɪv]

▶ **adj.** 原始的；早期的 referring to the early period of human development

- Thousands of years ago, primitive humans made tools out of wood and stones.

幾千年前，原始人用木頭和石頭製作工具。

2. **fiber**

[ˈfaɪbər]

▶ **n. [C]** (人、動植物身體組織的) 纖維 a fine

thread that makes up parts of the human body, including muscle, as well as such natural

substances as cotton and wood

- In the human body, there are several different types of muscle fibers which perform different tasks.

在人體裡，有數種不同的肌肉纖維，執行不同的工作。

▶ **n. [C]** (織物或繩等的) 纖維

- Clothing made of natural fibers like cotton or wool is better for the environment.

用棉花或羊毛等天然纖維製作的衣服對環境是比較好的。

Word Power



fiber



fibre

3. **tissue**

[ˈtɪʃu]

▶ **n. [U]** (人、動植物的) 組織 a substance made up of cells found in living things

- In the car accident, Mary suffered minor damage to some of her muscle tissue.

在這場車禍裡，Mary的一些肌肉組織受到輕微的損傷。

▶ **n. [C]** 紙巾；手巾紙

- Many people like to keep a box of tissues nearby when watching sad movies.

很多人喜歡在看悲傷的電影的時候放一盒衛生紙在旁邊。

4. **provoke**

[prəˈvɒk]

▶ **vt.** 激起；引起 to give rise to a reaction or have a specific effect

- David often says things to annoy other people because he enjoys provoking arguments.

David常常會說一些話來讓別人生氣，因為他喜歡引起爭執。

5. **recent**

[ˈrisnt]

▶ **adj. 最近的；近來的** happening a short while before the present time

- John's recent visit to the doctor's office has led him to start exercising more.

John最近一次去看醫生使得他開始更常運動。

6. **substantial**

[səbˈstænʃəl]

▶ **adj. 大量的；重大的** to a high or considerable degree

- Gold and diamonds are two materials that are both of substantial value.

黃金和鑽石是兩種有重大價值的材料。

7. **laboratory**

[ˈlæbrəˌtɔːri]

▶ **n. [C] 實驗室** (= lab) a room designed for performing scientific experiments and research

- The research laboratory was equipped with many scientific instruments used to conduct experiments.

這間實驗室配備有許多用來做實驗的科學儀器。

8. **unethical**

[ʌnˈɛθɪkl]

▶ **adj. 不道德的** morally wrong

- It is highly unethical to perform medical experiments on humans without their permission. 沒有經過他們允許就在人身上進行醫學實驗是極度不道德的。

ethical

[ˈɛθɪkl]

▶ **adj. 道德的**

- This company has high ethical standards to ensure that its male and female employees are paid equally. 這家公司有很高的道德標準來確保它的男性和女性員工有平等的薪資。

ethics

[ˈɛθɪks]

▶ **n. pl. 道德準則；倫理標準**

- Many people question the professional ethics of having a relationship with someone you work with.

很多人質疑跟共事的人交往的職業道德。

9. **torment**

[ˈtɔːmənt]

▶ **n. [U] (尤指精神上的) 折磨；痛苦** severe suffering, particularly mental suffering

- During his father's funeral, John started to cry, sinking to his knees in torment.

在他父親的葬禮上，John開始哭泣，痛苦地跪倒在地。

10. **livestock**

[ˈlaɪvˌstak]

▶ **n. [U] 牲畜；家畜** animals raised on a farm

- The agricultural fair has a livestock market where farmers can buy and sell animals.

這個農業博覽會有一個農夫可以買賣動物的牲畜市場。

11. **toll**

[tol]

n. [C] usually sing. (戰爭、災難等造成的) 毀壞；傷亡人數 the number of casualties to represent the total deaths caused by an incident

- After the earthquake, it took the government several days to figure out the exact death toll.

這場地震之後，政府花了數天的時間來釐清確切的死亡人數。

12. **estimate**

[ˈɛstəmet]

vt. 估計；估算 to guess the amount or size of something based on available information

- It is estimated that the bridge construction project will cost the government around \$50 million. 那座橋的建造計畫估計會花掉政府大概五千萬元。

estimate

[ˈɛstəmit]

n. [C] (對大小、數量、成本等的) 估計；估價

- We won't know the final cost until the building is completed, but the builders gave us a rough estimate.

underestimate

[ˌʌndəˈɛstəmet]

vt. 低估

我們在建築完成後才會知道最後的成本，但是營造商給了我們一個大概的估算。

- The importance of education can never be underestimated. A good education can change your life.

教育的重要千萬不能被低估。好的教育能夠改變你的人生。

13. **switch**

[swɪtʃ]

vi. vt. (使) 改變；轉變 to change something into something else or change from one option to another Tina沒辦法決定穿什麼去派對；她一直在白襯衫和紅襯衫之間換來換去。

- Tina couldn't decide what to wear to the party. She kept switching between the white shirt and the red blouse.
- When the lights went out, Tom switched his cellphone to silent mode so it wouldn't wake the baby up. 關燈之後，Tom將他的手機轉到靜音才不會將寶寶吵醒。

switch

[swɪtʃ]

n. [C] (電路的) 開關

- In most modern houses, the light switches are in convenient positions on the walls.

在大部分現代的房子裡，燈的開關都在牆壁上方便的位置。

14. **vitamin**

[ˈvaɪtəmin]

n. [C] 維他命 a substance in food that humans and animals need to stay healthy

- One of the most important vitamins for human vision is vitamin A, which is found in eggs and many green vegetables.

對人的視力最重要的維他命之一是維他命A，它可以在蛋類和許多綠色蔬菜中找到。

15. **mineral**

[ˈmɪnərəl]

► *n.* [C] 礦物質 a naturally occurring substance found in the earth, such as salt

- Although there are no lakes in this area, a lot of water rich in minerals can be found in the hot springs here.

雖然這個地區沒有湖泊，但是這裡許多的溫泉水有豐富的礦物質。

16. **concern**

[kənˈsɜːn]

► *n.* [C, U] 擔心（的事）；憂慮 something that worries you or a feeling of worry

- The president has several concerns about the new law. She's worried it will be difficult to enforce and just make the public angry.

總統對這條新法有幾個擔心的點。她擔心執行起來將很困難，並會讓大眾生氣。

- The government's decision to make guns illegal eliminated many people's concern about public safety.

政府將槍枝非法化的決定消除了許多人對於公眾安全的擔憂。

concern

► *vt.* 讓（某人）擔憂

[kənˈsɜːn]

- What concerns me most about David is that he eats so much junk food. He really should change his diet.

我對David最擔憂的是他吃太多垃圾食物。他真的該改變他的飲食。

concerning

► *prep.* 關於；涉及

[kənˈsɜːnɪŋ]

- The police have asked the public for any information concerning the missing boy.

警方已向大眾請求任何關於那名失蹤男孩的資訊。

17. **quantity**

[ˈkwɒntəti]

► *n.* [C] 數量 the number or amount of a certain item or thing

- I like shopping at Costco, where I can buy groceries in large quantities at a lower price.

我喜歡在好市多購物，在那裡我可以用較低的價錢買大批的食品雜貨。

18. **theory**

[ˈθiəri]

► *n.* [U, C] 學說；理論 a recognized collection of ideas explaining the reasons behind something existing or occurring

- Literary theory refers to the study of methods for analyzing works of literature.

文學理論指的是用來分析文學作品的方法研究。

- Darwin's theory of evolution is one of the most important sets of ideas in the history of science.

達爾文的進化論是科學史上最重要的整組想法之一。

theoretical

[ˌθiəˈrɛtɪkl̩]

▶ *adj.* 理論上的

- On a theoretical level, the idea of hiring more employees to increase production makes sense.

就理論的層面來說，聘僱更多員工來增加產量的想法是合理的。

19. **genetically**

[dʒəˈnetɪkəl]

▶ *adv.* 由基因決定地 by or through the genes found in a creature's DNA

- A person's physical appearance is genetically determined even before he or she was born. 一個人的外表甚至在他或她出生之前就由基因決定了。

genetic

[dʒəˈnetɪk]

▶ *adj.* 基因的

- Diseases are the result of many complex genetic and environmental factors. 疾病是許多複雜的基因跟環境因素所造成的結果。

gene

[dʒiːn]

▶ *n.* [C] 基因

- Children look like their parents because their parents pass on copies of their genes to them.

小孩看起來像他們的父母親，因為他們的父母親將他們基因複本傳遞給他們。

20. **latter**

[ˈlætə]

▶ *n.* (剛提及的兩者中) 後者 the second person or thing just talked about or mentioned

- Both a balanced diet and exercise are necessary to stay healthy, and the latter is especially important for office workers.

均衡的飲食和運動兩者對於維持健康都很重要，而且後者對辦公室員工尤其重要。

latter

[ˈlætə]

▶ *adj.* 後者的

- There is a train in the morning and one in the afternoon. Taking the latter one would allow us to sleep in.

早上跟下午各有一班火車；搭後者我們就可以睡晚一點。

21. **induce**

[ɪnˈdʒus]

▶ *vt.* 引起；導致 to cause a particular effect or condition

- Some people drink herbal tea late at night to induce sleep.

有些人會在深夜喝草本茶來助眠。

22. **allergic**

[əˈlɜːdʒɪk]

▶ *adj.* 過敏的 having an allergy to something

- People who are allergic to nuts may experience a runny nose and itchy, red skin even from eating a small amount.

allergy

[ˈæləˌdʒɪ]

▶ *n.* [C] 過敏反應

對堅果過敏的人即使吃一點點都可能會流鼻水和皮膚發癢、發紅。

- Many people have allergies to cat or dog fur and therefore cannot keep such animals as pets.

許多人對貓毛或狗毛有過敏反應，而因此不能養這樣的動物當寵物。

23. **reaction**

[rɪˈækʃən]

react

[rɪˈækt]

24. **somewhat**

[ˈsʌmˌhwʌt]

25. **composition**

[ˌkəmpəˈzɪʃən]

compose

[kəmˈpoz]

composer

[kəmˈpɒzə]

26. **alter**

[ˈɒltə]

n. [C] 生理反應；副作用 a negative physical response to something

- Jane's scalp wouldn't stop itching. It appeared that she'd had an allergic reaction to her new shampoo. Jane的頭皮一直很癢。看來好像她對她的新洗髮精產生了過敏反應。

n. [C] 反應；回應

- Tom's reaction to his promotion at work was one of pure joy. He couldn't stop smiling. Tom對於他工作升官的反應是一種純粹的喜悅。他微笑個不停。

vi. 起反應；回應

- When the frying pan caught fire, Frances reacted to the situation calmly, turning off the heat and covering the pan with a metal lid. 當炒鍋起火時，Frances冷靜應對此情況，關掉爐火並用金屬鍋蓋將鍋子蓋住。

adv. 有點；有幾分 to a certain extent

- Although James shouldn't have lied to Mary, she still felt somewhat guilty about being so angry with him. 雖然James不應該對Mary說謊，但是她還是對於向他生這麼大的氣感到有點內疚。

n. [U] 成分；構成 the materials that something is made up of and how these materials are arranged

- A substance's chemical composition refers to the chemical elements it contains and their amounts. 一個物質的化學成分指的是它所包含的化學元素和其數量。

vt. 組成；構成

- Kelsey is captain of the school quiz team, which is composed of six members in total. Kelsey是學校知識競賽團隊的隊長，這個團隊總共由六個成員所組成。

n. [C] 作曲者；創作者

- Mozart wrote his first pieces of music at the age of five and was a professional composer at fourteen. 莫札特在他五歲的時候寫了他第一首曲子，然後在十四歲的時候成為一個專業作曲家。

vt. vi. (使) 改變；更動 to change, or change something

- David usually alters his hairstyle once every three months when he gets bored with it. David通常每三個月就會對髮型厭倦而換一次髮型。
- Just as fashion trends change, people's tastes in clothes alter with the times. 就像時尚潮流的改變，人們對於服裝的品味也隨著時間而改變。

27. **suit**

[sut]

suitable

[ˈsutəbl̩]

▶ **vt.** 滿足 (某人) 需要 ; 合 (某人) 心意 to benefit or be useful to someone in some way

- Working from home suits Frank because it enables him to keep a flexible schedule. 在家工作適合Frank，因為這讓他可以保有彈性的時間表。

▶ **adj.** 合適的 ; 適宜的

- Wearing jeans and a T-shirt is not suitable when you are attending a wedding.

參加婚禮的時候穿牛仔褲跟T恤是不適合的。

28. **scale**

[skel]

▶ **n. [C]** 規模 the degree or size of something in comparison with similar things

- KYMCO manufactures scooters and motorbikes on an extremely large scale, producing more than 500,000 vehicles every year.

光陽極大規模地製造機車和打檔機車，每年生產超過五十萬輛車。

29. **inclusive**

[mˈklusɪv]

▶ **adj.** 包括一切的 ; 範圍廣泛的 including everything; not leaving any part out or indicating that everything that is usually expected is included

- Today's inclusive tour will take you to every part of the museum and its surrounding gardens, and includes a free beverage at the end.

今天的全包行程將會帶你去這座博物館的每個地方和它周圍的花園，結束的時候還有一杯免費的飲料。

Idioms and Phrases Track 62

1. **have...at heart** 在意 ; 關心 to consider something extremely important

- Rebecca's father has her best interests at heart. He helps her with her homework and piano practice every night. Rebecca的爸爸在意她的最大利益。他每天晚上都幫忙她做作業跟練習鋼琴。

2. **rest assured** (強調所言確鑿無誤) 儘管放心 to emphasize that something is sure to happen

- Rest assured that I'll have this job finished for you by 5 p.m. 儘管放心，我會在下午五點之前幫你這件工作都做完。

3. **better still** 更好的是 ; 何不 indicating that one option is preferable to another

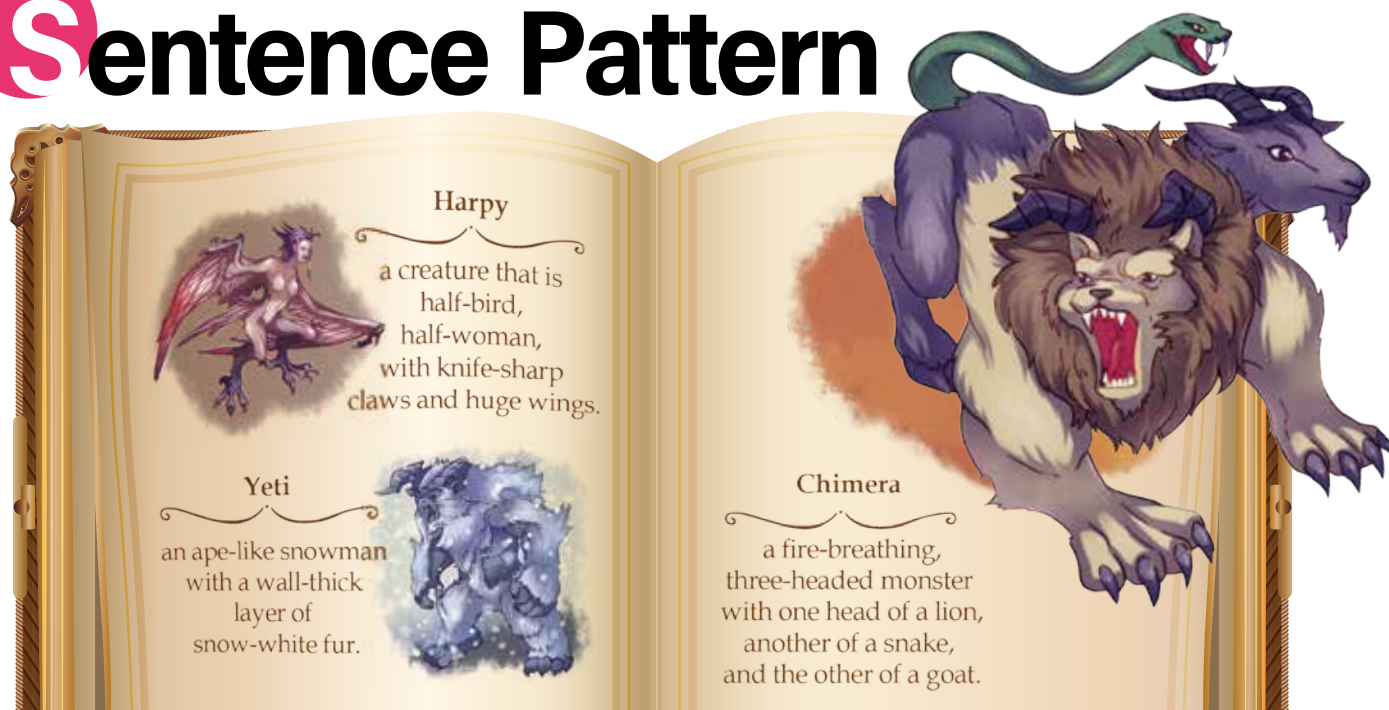
- If Mary is still angry with you, give her a call to apologize, or better still, go and say sorry in person. 如果Mary還在生你的氣，打電話跟她道歉，或者親自去跟她說聲抱歉更好。

4. **take a...toll** 造成惡果 to negatively influence or cause harm or damage to something
- Over time, drinking too much alcohol takes a heavy toll on a person's health.
久而久之，喝太多酒會對一個人的健康造成傷害。
5. **in theory** 理論上；按理說 reasonable but not proven in practice
- In theory, the bridge construction project has many benefits, but in practice, it would probably cause many financial problems for the government.
理論上，這座橋的建造計畫有許多好處，但是實際上，它大概會造成政府許多財政上的問題。
6. **at a price** 付出代價 indicating that something involves unavoidable negative outcomes
- John's pursuit of fame came at a price because it cost him many of his closest friendships.
John為追求成名付出了代價，因為他失去了很多親密的友誼。
7. **jump to conclusions** 匆忙下結論；貿然斷定 to make a quick judgment or decision without learning or considering all the facts
- You should avoid jumping to conclusions. Get some information before you decide.
你應該避免匆忙下結論。在你決定之前取得一些訊息吧。
8. **keep a(n) (...) eye on...** 照看；留意 to closely monitor something or the progress of something
- Throughout the school year, Tim's parents have kept a close eye on his test scores to make sure he is consistently improving.
整個學年，Tim的父母親一直盯著他的考試成績，以確保他一直有在進步。

Words for Recognition Track 63

- Petri dish** [ˈpetriˌdiʃ] *n.* [C] 皮氏培養皿
- start-up** [ˈstartˌʌp] *n.* [C] 新成立的公司；新企業
- stem cell** [ˈstemˌsɛl] *n.* [C] 幹細胞
- slaughterhouse** [ˈslɒtəˌhaʊs] *n.* [C] 屠宰場
- patty** [ˈpæti] *n.* [C] 碎肉餅
- FAO (Food and Agriculture Organization of the United Nations)** [ˈefˈeːo] *n.* 聯合國糧食與農業組織
- greenhouse gas** [ˈgrɪnhaʊsˌɡæs] *n.* [C] 溫室氣體（尤指二氧化碳）
- forward-thinking** [ˈfɔrwədˌθɪŋkɪŋ] *adj.* 有前瞻性的
- far-reaching** [ˌfɑːˈriːtʃɪŋ] *adj.* 深遠的
- infrastructure** [ˈɪnfəˌstrʌktʃə] *n.* [C] 基礎建設
- genetically modified** [dʒəˈnetɪklɪˌmɒdəˌfaɪd] *adj.* 基因改造的
- connective** [kəˈnɛktɪv] *adj.* 連結的
- all-inclusive** [ˌɔl ɪnˈklusɪv] *adj.* 無所不包的；包括一切的

Sentence Pattern



在此語境中，為了以較精簡的文字，具體描述各神話生物的外觀，因此使用複合形容詞。

Compound Adjectives

複合形容詞是由至少兩個單字所組成的形容詞，字與字間通常用連字號「-」連接，複合形容詞常見的形式有：

- (1) 數字+名詞：a **ten-story** building、a **five-star** hotel（此處的名詞多為單位量詞，需用單數。）
- (2) 數字+名詞-ed：a **three-legged** dog、a **one-eyed** man
- (3) 形容詞+名詞-ed：an **open-minded** person、a **kind-hearted** lady
- (4) 名詞+形容詞：a **sugar-free** soda、a **user-friendly** app
- (5) 名詞+現在分詞：a **time-saving** solution、a **peace-loving** nation
- (6) 名詞+過去分詞：a **heart-broken** person、a **hand-made** cake
- (7) 形容詞+現在分詞：a **nice-looking** girl、a **high-ranking** position
- (8) 形容詞+過去分詞：a **clean-cut** soldier
- (9) 副詞+現在分詞：a **best-selling** novel、a **hard-working** employee
- (10) 副詞+過去分詞：a **well-educated** person、a **newly built** bridge
- (11) 多字組成：an **all-you-can-eat** restaurant、a **once-in-a-lifetime** experience

Examples

1. It's a thought-provoking recent trend that is backed by both Bill Gates and agricultural giant Cargill. (line 8)
2. One could argue that traditional or old-fashioned meat production facilities, such as farms or factories, hardly ever have the animals' best interests at heart. (line 14)
3. The so-called lab-grown beef patty on your plate didn't come from a cow that had to endure physical or mental torment. (line 19)

Practice

Summarize the following missing person notice by using the pattern above. The first one has been done for you.

Leslie Sanders was last seen on May 7th outside a Burger King between 10th and 11th Street. She is a law student ①who works hard. She is a young woman with ②fair skin and ③hair that is ginger. She was wearing a necklace ④in the shape of a heart. She was also wearing a navy-blue sweater, jeans, and a pair of boots ⑤in bright colors. Witnesses saw her talking to a man ⑥who looked suspicious.



News Anchor: Coming up is a new missing person case. Leslie Sanders was last seen on May 7th outside a Burger King between 10th and 11th Street.

A ¹ hard-working law student, Leslie is a ² fair-skinned and ³ ginger-haired young woman. On the night she went missing, she was wearing a ⁴ heart-shaped necklace. She was also wearing a navy-

blue sweater, jeans, and a pair of ⁵ bright-colored boots. Witnesses saw her talking to a ⁶ suspicious-looking man that night. The police are urging anyone who saw or heard anything that night to provide information.



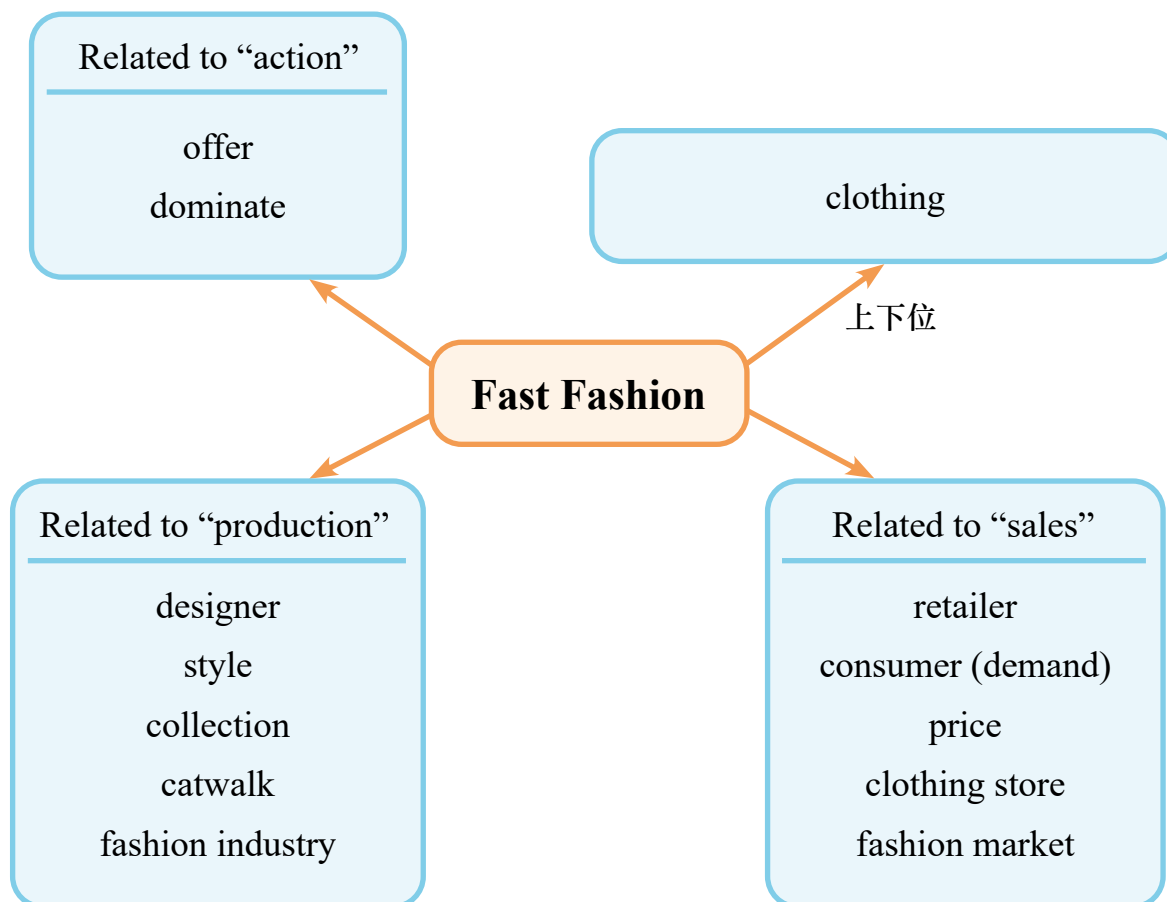
Language Highlight

Semantic Fields (語意場)

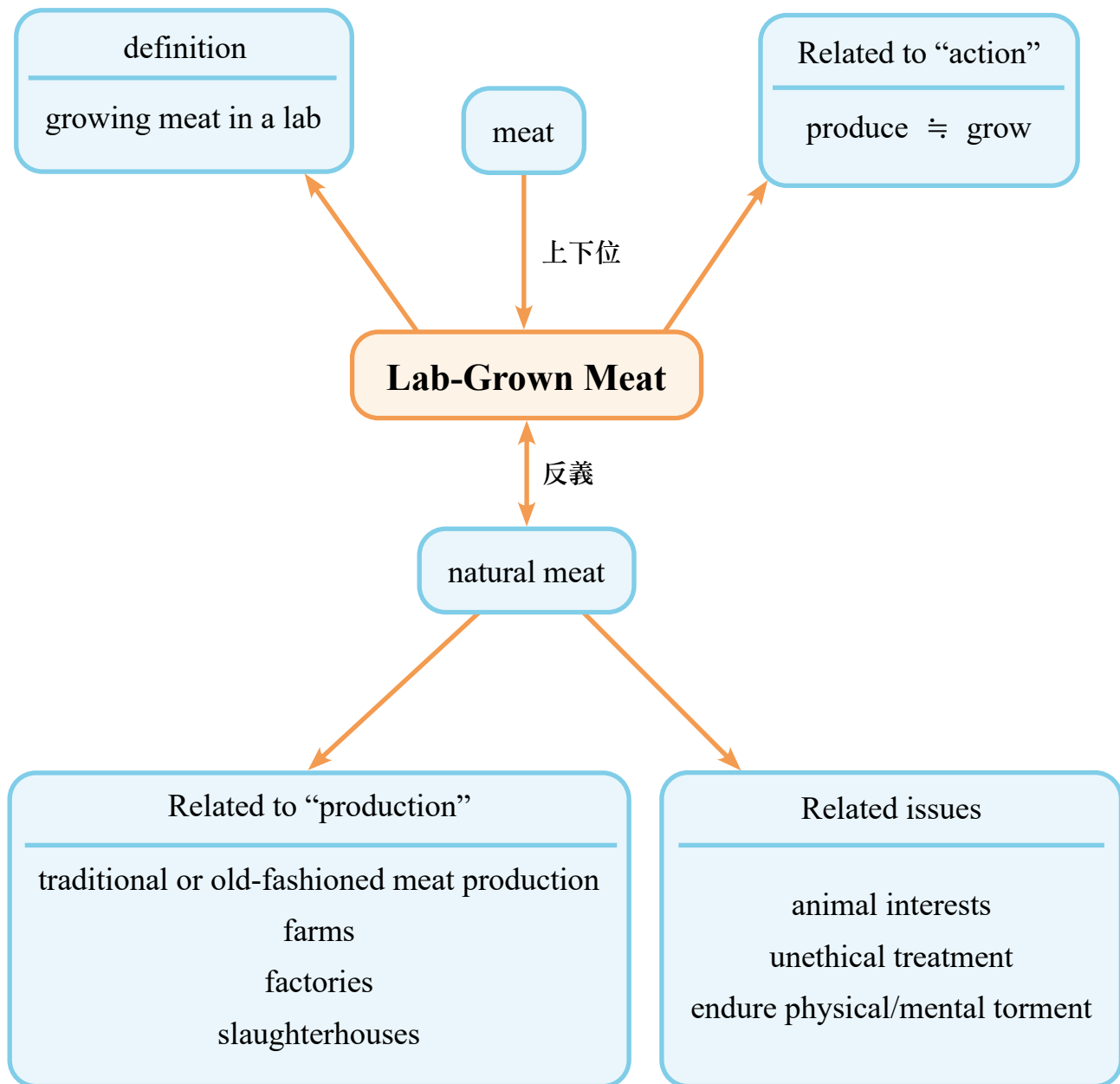
在篇章中，為使主題貫穿全文，除了利用重複、同近義字、反義字、上下位關係、整體局部關係的字詞外，亦會使用與主題語意相關的詞彙，形成圍繞同一主題的語意場（semantic fields），以維持篇章的語意連貫性。

Over the last decade, the **fashion industry** has been transformed by **consumer demand** for **designer** looks at affordable **prices**. **Retailers offering clothing** made cheaply and quickly now **dominate** the **fashion market**. Instead of the six months it used to take for distinctive new **styles** to make their way from **catwalks** to **clothing stores**, stunning new **collections** are now emerging every few weeks! This trend is known as “**fast fashion**.”

以圖像呈現上方段落的語意場如下：



Examples

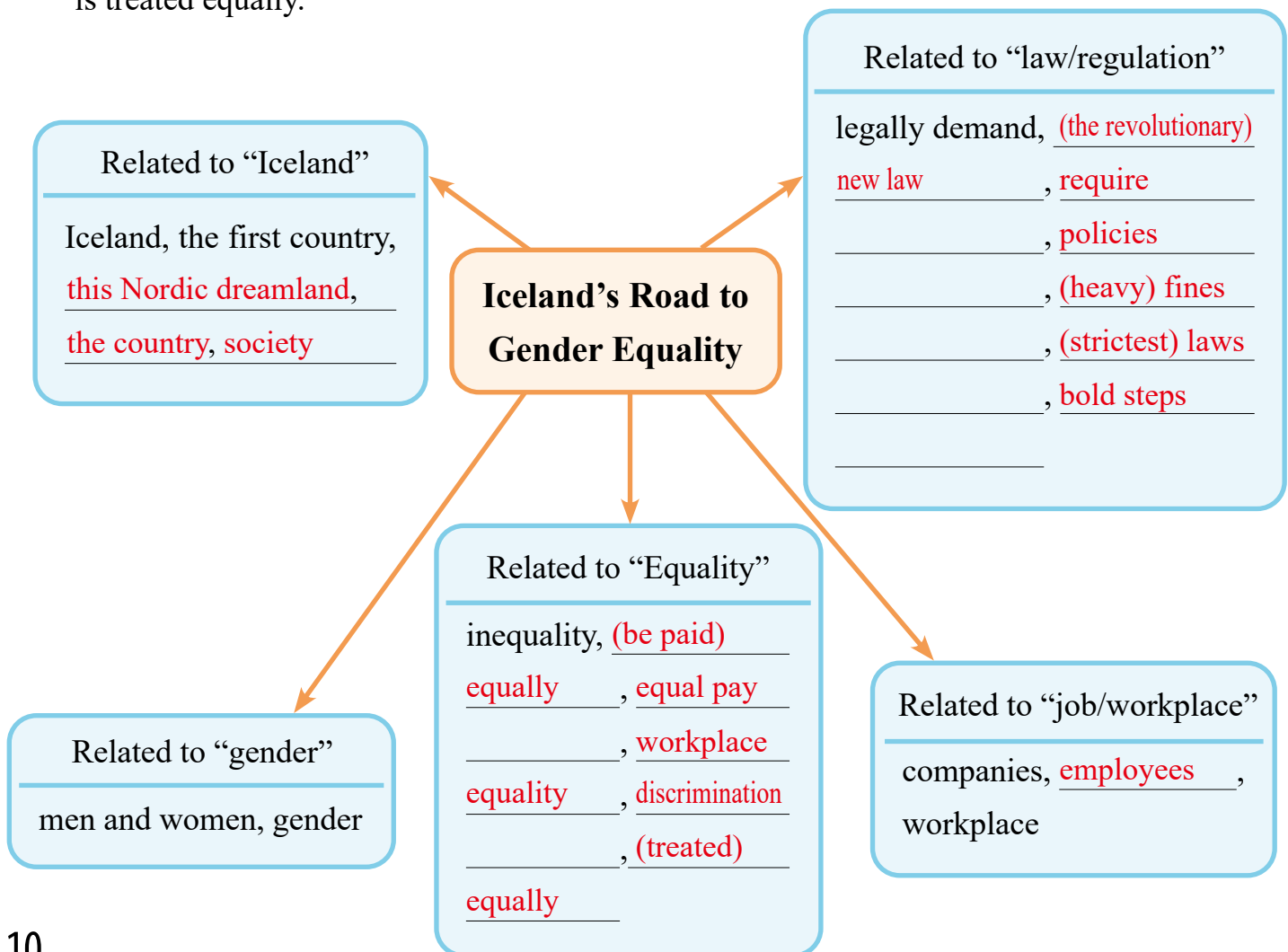


(paragraph 2, line 11)

Practice

The following passage from “Iceland’s Road to Gender Equality” contains several words or phrases related to the concepts of a country (Iceland), law or regulation, gender, equality, and the workplace. Find the relevant words or phrases and complete the mind map below. Examples are given below.

Recently Iceland decided to get tough on inequality. In 2018, it became the first country to legally demand that men and women be paid equally. The revolutionary new law required that companies with at least twenty-five employees obtain a certificate proving that they were following national equal pay policies; otherwise, they would face heavy fines. Today, this Nordic dreamland has some of the world’s strictest laws on workplace equality. Despite having achieved so much, the country continues to take bold steps to eliminate gender discrimination and become a fairer society where every person is treated equally.



Transition Signals: Discussion Essay

議論文 (discussion essay) 中，內容主要是針對一個議題，探討正反雙方不同的論點。

(1) 常用於逐一系列論點的轉承詞如下：

Sentence connectors	✦ first/firstly ✦ to begin with ✦ first of all ✦ for a start ✦ second/secondly ✦ next ✦ moreover ✦ furthermore ✦ in addition ✦ better still ✦ what's more/worse
	✦ last/lastly ✦ finally ✦ last but not least
	Graffiti makes a mess. Firstly , graffiti is nothing but visual pollution. These ugly paintings make cities look messy. In addition , most graffiti is done without permission. It takes a lot of money and effort to get rid of it. What's worse , graffiti harms communities. Many people believe that graffiti is associated with criminal activity. If graffiti causes all these problems, can we really call it art?

(2) 常用於陳述正反論點的轉承詞如下：

Sentence starters	✦ One/Many/People could/might argue/claim that... ✦ Supporters/Advocates say/claim/believe that... ✦ Opponents counter that...
Example	Opponents counter that there is no firm evidence linking smoking with lung cancer.

(3) 常用於提列證據以支持論點的轉承詞如下：

Sentence starters	✦ Research/A study shows/suggests/indicates that... ✦ Researchers/Experts estimate that... ✦ It is reported/suggested that...
Example	Research suggests that dog owners have a lower risk of heart disease.

Examples

The widespread support for producing meat in this way is due to the fact that it holds several advantages compared to more traditional methods. **Firstly**, **one could argue that** traditional or old-fashioned meat production facilities, such as farms or factories, hardly ever have the animals' best interests at heart. Growing meat in a laboratory instead would help eliminate the need for slaughterhouses and the unethical treatment of these animals. In other words, you could rest assured that the so-called lab-grown beef patty on your plate didn't come from a cow that had to endure physical or mental torment. **Better still**, it could help make meat production more sustainable. The raising of livestock needed to fulfill the current global demand for meat actually takes a heavy toll on the environment. According to FAO, it accounts for nearly 15 percent of greenhouse gas emissions. **Experts estimate that**, by switching to lab-grown meat, emissions could be lowered by up to 96 percent. **In addition**, **many claim** it won't just be the environment that benefits. Scientists can actually make lab-grown meat healthier and more nutritious for humans by adding vitamins and minerals that are not always found in natural meat. (paragraph 2, line 11)

Practice

Mary has written an essay on the pros and cons of distance learning. However, she forgot to put in transition words. Help her insert appropriate transition words to make her writing more organized. The first one has been done for you.



First and foremost


For example

Despite

Better yet

Still another drawback

Furthermore



The advance of technology has opened up a world of possibilities of learning, and one of the new approaches is distance learning. When it comes to taking courses online, there are certainly numerous advantages. ¹ First and foremost, distance learning allows one to study at any time and anywhere. With an Internet connection, you can attend classes without commuting to school. In addition, with all the materials available online, you don't need to carry heavy textbooks. ² Better yet, online learning allows you to learn at your own pace. Therefore, if there is a certain part that you don't understand, you can always slow down, pause and even go back until you fully comprehend.

³ Despite its advantages, distance learning has its drawbacks. To begin with, one might argue the complicated technology may be a big concern. ⁴ For example, if there were any software or Internet problem, the course would come to a standstill. ⁵ Furthermore, some people may find themselves slacking off or procrastinating*. Distance learning may not be a good option for undisciplined or unmotivated students. ⁶ Still another drawback to distance learning is the lack of social interaction. Students can engage in face-to-face interaction with their peers in a traditional classroom, but distance learning deprives them of such opportunities.

To sum up, although distance learning has many benefits, I still prefer the traditional way of learning. I find myself easily distracted and need my classmates to motivate me. The personal interaction is something I value most and something technology cannot replace.

L

istening Strategy



Track 64



Scan and Listen

Strategy Review

Note-Taking

Speakers often discuss both the pros (favorable parts) and the cons (unfavorable parts) for a specific issue. If you are aware that a lecturer or a talk will discuss both sides of an issue, use two columns so that you can take notes to list the main ideas easily.

Listening for Key Information

Before you listen for information about the talk, it is important to keep the 5W1H in mind. What are they discussing? Who can use it? When can they use this item? Why do they use it? Where can it be used? How do people use it? Listening for the answers to these questions makes you capable of gathering data and guides you toward a better understanding.

Listening Comprehension

Read through the text, chart, and questions. Then, listen to the recording. Fill in the blanks in the chart and choose the most appropriate answer for each question.

3-D Printing

Pros

- Freedom of design to produce¹ a vast range of shapes.
- Simple production method.
- ² lighter materials.

Cons

- It can cause unemployment.
- A ³ limited range of materials can be used.
- This technology, using mainly plastic, ⁴ harms the environment.

- D 1. (A) The popularity of 3-D printing.
(B) The arrival of new technology.
(C) The problems with the use of plastic.
(D) The advantages and disadvantages of 3-D printing.
- C 2. (A) People can use it to save money.
(B) It can replace labor to produce things.
(C) People can create objects of any shape with it.
(D) It can produce not only metal things but plastic ones.
- D 3. (A) Some people will lose their jobs in the future.
(B) The use of plastic will harm the environment.
(C) A limited range of materials can be used in 3-D printing.
(D) It's slow when it comes to manufacturing many objects.
- D 4. (A) The environment will be cleaner.
(B) People will have more job opportunities.
(C) The manufacturing process will be simplified.
(D) Increasingly cheaper 3-D printing services will be available.

