

# REFLECT

**READING & WRITING**

**ANSWER KEY**

## UNIT 1 ANSWER KEY

### CONNECT TO THE TOPIC (p. 3)

1. *Answers will vary. Possible answers:* Arnie seems to be enjoying the music that Lloyd is playing and wants to get a closer look. This photo might make you feel amused or curious. If you don't like birds, you might even feel disturbed.
2. *Answers will vary.*

### WATCH

#### B (p. 4)

1, 3, 4, 6, 7

#### C (p. 4)

1. the world; 2. life; 3. time; 4. history; 5. people

### PREPARE TO READ

#### A (p. 5)

1. g; 2. e; 3. j; 4. h; 5. b; 6. d; 7. f; 8. a; 9. i; 10. c

#### B (p. 5)

1. engage; 2. Portraits; 3. prompt; 4. remote;  
5. habitat(s)

### READ

#### A (p. 6)

*Answers will vary. Possible answer:*

stories about animals or about everyday people

#### B (p. 9)

1. 5, 2; 2. 3, 1; 3. 4, 1

#### C (p. 9)

1. portraits; 2. eyes; 3. human; 4. emotional response; 5. large/big; 6. equal voice; 7. species;  
8. ourselves; 9. better choices; 10. injured; 11. law

#### D (p. 10)

- a. quote: We can "connect with that person or that topic even if they're thousands of miles away and have nothing to do with your reality and your world."
- b. reason: When viewers see these images, they can see that the hopes, interests, and activities of the people in these remote areas are not so different from their own.

c. example: One of his most well-known projects is the *Solar Portraits* . . . he took photos of people who had only recently gained access to electricity from solar-powered light bulbs.

d. *No research findings in paragraph.*

### PREPARE TO READ

#### A (p. 11)

1. mode; 2. assemble; 3. recall; 4. store; 5. trigger;  
6. implications; 7. superior; 8. slightly; 9. exclusively;  
10. demonstrate

### READ

#### A (p. 12)

b

#### B (p. 14)

a. 3; b. 6; c. –; d. 2; e. 4; f. –; g. 5

#### C (p. 15)

1. 90 percent/90%; 2. 10 percent/10%;  
3. dual encoding; 4. a thousand;  
5. Picture Superiority Effect; 6. buy

#### D (p. 15)

1. c; 2. c; 3. b; 4. c; 5. b; 6. a

### WRITE

#### A (p. 16)

She was very upset.

*Highlighted as the reason for her response:*

Looking at the photo broke my heart because the beach was such a special memory for me.

#### B (p. 17)

a. 2; b. 5; c. 4; d. 1; e. 3

#### C (p. 18)

1. Hook: We've all heard the expression "A picture is worth a thousand words," but do people really believe it?
2. Thesis: I never thought I would say this, but a photograph made me make some changes in my life.

**D (p. 18)**

a, d

**E (p. 18)**

a, b, d

**G (p. 19)**

The photo showed a beach in Bali, Indonesia. I had been to that beach four times. It was the most beautiful place in the world. For me, it was a remote paradise with clean white sand and clear blue water. But this didn't show any of that. Instead, it showed a beach covered in plastic—plastic bags, plastic cups, plastic boxes—as well as dead fish and other animals. I had read about the problem of garbage washing up on islands across the Pacific and Indian Oceans. I had heard news reports about huge amounts of plastic floating in the ocean, but the photo made the situation real for me.

**H (p. 20)**

**1.** had studied/had been studying, was; **2.** had hoped/had been hoping, arrived; **3.** were, had waited/had been waiting, left; **4.** received, had been looking; **5.** remembered, had seen; **6.** ended, had described

**I (p. 20)**

By the time my friend Gabriela was 18, she **<sup>1</sup>had studied/had been studying** studied drawing for more than 10 years. She was always

drawing pictures of her friends and family. She wanted to be a painter. She **<sup>2</sup>had loved** loved art since she was very small, but after she started college, she started to question her goals. Then, one day, a friend invited her to an art gallery to see a photography exhibit. She **<sup>3</sup>had** never really **looked** looked at photographs as art until that moment. Looking at the photos in the gallery was a completely new experience. Every photo **<sup>4</sup>had** told a story. When she went home that night, she realized that she **<sup>5</sup>had been/was studying** studied the wrong thing. She loved art, but she decided that she wanted to study photography. The next week she changed her major to photography.

After that, in addition to taking courses, she worked as a photographer for the college newspaper. She learned everything she could. Three years later, she graduated. She got a great job with a magazine. She traveled all over the world taking photographs. By the time she was 30, she **<sup>6</sup>had traveled** traveled to all seven continents, including Antarctica! She has been very happy and knows that she made the right decision.

**REFLECT**

**B (p. 23)**

**Noun:** course, habitat, humanity, implications, link, mode, portrait

**Verb:** assemble, demonstrate, engage, prompt, recall, store, trigger;

**Adjective:** formal, remote, superior

**Adverb & Other:** deliberately, exclusively, slightly

## UNIT 2 ANSWER KEY

### CONNECT TO THE TOPIC (p. 25)

1. *Answers will vary.*
2. *Answers will vary.*

### WATCH

B (p. 26)

**Linear economy:** 3, 5, 7

**Circular economy:** 1, 4, 5

### PREPARE TO READ

A (p. 27)

1. c; 2. a; 3. b; 4. a; 5. b; 6. c; 7. c; 8. a; 9. c; 10. a

### READ

A (p. 28)

*Answers will vary. Possible answer:*

A combination. We still throw a lot of things away, but we also do some recycling.

B (p. 31)

- a. 7; b. –; c. 3; d. 8; e. 6; f. 4; g. 5; h. 2

C (p. 31)

1. e-waste; 2. recycling; 3. refurbishing;
4. raw materials; 5. component

D (p. 31)

1. F; We waste about **two-thirds** of the raw material we take from the earth.
2. F; Timberland is collaborating with a **tire** manufacturer.
3. T
4. T
5. F; **Manufacturers of televisions and home appliances** in Japan are required to collect and recycle their products.
6. F; About a trillion **dollars** of food are wasted every year.
7. F; The circular economy could add \$2 **trillion** to the economy by 2050.

E (p. 32)

*Answers will vary. Possible answers:*

**Highlighted as main idea:** have developed more than 12,000 new materials from trash, which can be used in construction

**Highlighted and numbered as important**

**supporting ideas/details:** an entire store made from trash (1); a temporary building made from 1.5 million plastic bottles (2)

**Circled as unfamiliar word:** withstand

**Underlined with wavy line as something to comment on:** made them into bricks similar to LEGO blocks (Cool idea!)

**Underlined as summary:** Miniwiz is helping bring us closer to a circular economy

F (p. 32)

*Answers will vary. Possible answers:*

Paragraph 4

**Highlighted as main idea:** products are designed from the beginning to be long-lasting and easy to repair

**Highlighted and numbered as important**

**supporting ideas/details:** products are made from higher-quality materials (1); designed so that their parts are easy to access (2)

**Circled as unfamiliar word:** rubber

**Underlined with wavy line as something to comment on:** shoe company Timberland (Ex.); make tires with the high-quality rubber that Timberland needs (Great idea!)

Paragraph 7

**Highlighted as main idea:** A basic principle of the circular economy is that any waste should be used to make another product.

**Highlighted and numbered as important**

**supporting ideas/details:** using some of it in an unusual way—to grow black flies (1); Entocycle sells the larvae to fish farms. (2); fed to the salmon that will end up on our dining tables (3)

**Circled as unfamiliar word:** hatch

**Underlined with wavy line as something to comment on:** Entocycle (Ex.); Flies eat just about anything; they love food waste. (Yuck!)

### PREPARE TO READ

B (p. 33)

1. survey; 2. demand; 3. renewable; 4. extend;
5. ownership; 6. upgrade; 7. key; 8. purchases;
9. turn to 10. possessions

## READ

### A (p. 34)

*Answers will vary. Possible answers:*

1. Usership means we pay a small amount of money to use something.
2. Usership is different from ownership because ownership means the state of owning something.

### B (p. 37)

*Answers will vary. Possible answers:*

Paragraph 4

**Highlighted as main idea:** For consumers, the benefits of usership are clear.

**Highlighted and numbered as important supporting ideas/details:** don't have to pay a high purchase cost (1); worry about maintenance (2)

**Underlined with wavy line as something to**

**comment on:** Many of them don't want the responsibility of having lots of possessions. (Me too!)

**Underlined as summary:** Consumer interest in these kinds of services is increasing dramatically for everything from cars to clothing.

Paragraph 5

**Highlighted as main idea:** For businesses, usership also has advantages.

**Highlighted and numbered as important supporting ideas/details:** regular and predictable income (1); plan ahead for the day when it will be harder to get the non-renewable raw materials (2); can improve their public image (3)

**Underlined with wavy line as something to**

**comment on:** Fairphone (Ex.); IKEA (Ex.)

**Circled as unfamiliar word:** public image

**Underlined as summary:** This positive public image is good for business.

### C (p. 37)

**a.** 6; **b.** 2; **c.** 4; **d.** 1; **e.** 5; **f.** 3

### D (p. 37)

1. IKEA; 2. IKEA and Fairphone; 3. IKEA and Fairphone; 4. Fairphone; 5. Fairphone; 6. IKEA; 7. IKEA and Fairphone

## WRITE

### A (p. 38)

1, 3

### B (p. 40)

1. If we move to a circular economy, both inputs and outputs will be better balanced, so our planet will stay healthy.
2. A circular economy recycles and reuses raw materials and doesn't waste them. (paragraph 2)  
A circular economy also reduces the number of products we throw away. (paragraph 3)
3. a linear economy takes billions of tons of these "inputs" from the earth and reuses less than 10 percent of them. (paragraph 2)
4. For example, glass jars and bottles can be recycled to make building materials. (paragraph 3)
5. b, c, d

### C (p. 40)

1. a, e; 2. c, d, f

### D (p. 41)

1. Studies are being conducted to determine the impact of waste.
2. The results will not be released until next year.
3. These studies must be repeated every few years.
4. The move to the circular economy can't be delayed for much longer.
5. The deadline for applications is being extended.
6. Too many raw materials are used in a linear economy.
7. Recommendations will be made to help reduce waste./Recommendations to help reduce waste will be made.

### E (p. 42)

1. yet it could be used to make something useful.
2. so that they can be repaired or replaced./so they can be repaired or replaced.
3. although it could easily be recycled.
4. because they are being designed for a longer life.
5. which can be extracted to make new products.
6. that can be repaired, refurbished, or recycled.

**F (p. 42)**

*Answers will vary. Possible answers:*

1. However, they are quickly being replaced with new ones.
2. For example, they can be extracted from old products and recycled.
3. However, it has been reduced in some countries.
4. These products can be rented for a short period—from an hour to a week.

**G (p. 42)**

Product packaging costs a lot, but very little of it **is recycled**. A new company in Santiago, Chile, Algramo, is hoping to change that, one bottle and bag at a time. When a bottle of soap is finished, it **can be returned** to a vending machine at a supermarket. In fact, the bottle **can be returned** over and over again. Each bottle has a special code, and each time **it is returned**, the price of the soap is lower.

**H (p. 43)**

Most soaps and shampoos <sup>1</sup>**are sold** ~~sell~~ in plastic bottles. Most rice and beans <sup>2</sup>**are sold** ~~sell~~ in plastic bags. Unfortunately, most of this packaging is <sup>3</sup>**thrown** ~~throwed~~ away. Many consumers say they want manufacturers to reduce the amount of packaging that <sup>4</sup>**is** used in their products, especially plastic. Today, less plastic is being <sup>5</sup>**used** ~~use~~ in packaging than in the past, but more must be <sup>6</sup>**done** ~~doing~~.

**REFLECT****B (p. 45)**

**Noun:** component, demand, flaw, harmony, key, ownership, possession, principle, purchase, survey

**Verb:** claim, collaborate, eliminate, extend, extract, turn to, upgrade, wear out

**Adjective:** renewable, sustainable

## UNIT 3 ANSWER KEY

### CONNECT TO THE TOPIC (p. 47)

1. *Answers will vary. Possible answer:* Photography changed the way we share information and how we remember things. Because of photography, we can see new things across the world and clearly see how things change over time. Some photos have inspired people to make changes in the world.
2. *Answers will vary.*

### WATCH

**A** (p. 48)

2

**B** (p. 48)

1. flour; 2. bread; 3. noodles; 4. tasty; 5. time

**C** (p. 48)

1. wife; 2. fried; 3. oil; 4. success; 5. packages

### PREPARE TO READ

**A** (p. 49)

1. bacteria; 2. settle; 3. preserve; 4. limitation;  
5. tightly; 6. critical; 7. break down; 8. transform;  
9. nutritious; 10. adapt

### READ

**A** (p. 50)

*Answers will vary. Possible answer:*

Without preserved food, people would still have to move around a lot for their food and wouldn't be able to stay in one place. There might not be cities since no one could stay put and keep fresh food with them.

**B** (p. 52)

Main ideas: b, e, f

**C** (p. 53)

1. T; 2. T; 3. NG; 4. F; 5. NG; 6. T

**D** (p. 53)

1. 6; 2. 7; 3. 5; 4. 8

**E** (p. 53)

2, 3

**F** (p. 54)

- 1, 2, 3, 5

**G** (p. 54)

- 1, 2, 3, 5

### PREPARE TO READ

**A** (p. 55)

1. b; 2. c; 3. a; 4. c; 5. a; 6. b; 7. b; 8. c; 9. a; 10. a

### READ

**A** (p. 56)

b

**B** (p. 58)

a, c, d, e

**C** (p. 58)

Answer a is the best alternative title. Answer b is not the best because plastic has not been a complete success. Answer c is not the best because plastic is still widely used.

**D** (p. 58)

1. raw; 2. shapes; 3. consumers/people;  
4. drawback; 5. waste; 6. quickly

**E** (p. 58)

- 1, 2, 4, 5

### WRITE

**B** (p. 61)

*Answers will vary. Possible answers:*

1. In fact, at one time, students leaving home to go to college would receive a typewriter as a gift, a sign that they had become adults.
2. solved a number of problems, revolutionizing many 19th-century businesses
3. a. Problem: Before typewriters, keeping business records was a manual process.  
b. Problem: Handwriting can be difficult to read, which sometimes led to errors.  
c. Solution: The typewriter addressed these problems.
4. a, c

**C (p. 62)**

*The words in bold should be highlighted:*

Do you write your essays on a laptop or tablet? **Most** students **probably** do. But ask your grandparents what they used to use and they are **likely** to say, "a typewriter." In fact, at one time, students leaving home to go to college would receive a typewriter as a gift, a sign that they had become adults. Typewriters now seem old-fashioned, but in the 19th century they helped change the world. The invention of the typewriter solved a number of problems, revolutionizing **many** 19th-century businesses.

**D (p. 62)**

*Answers will vary. Possible answers:*

1. Preserving food **helped** solve the problems of hunger.
2. **Some** early humans **probably** died from eating food that was full of dangerous bacteria.
3. The first fermentation **may have** happened by accident.
4. Drying is **sometimes** the best method for preserving foods.
5. In the past, **many** homes had cellars under the house to store vegetables for the winter.

**E (p. 62)**

*Answers will vary. Possible answers:*

1. **Many** rich people played billiards.
2. The glass plates used by photographers **sometimes** broke.
3. The manufacturing of plastic **is one factor** in global warming.
4. Bioplastics are **probably** better for the environment.

**F (p. 63)**

b.

But ask your grandparents what they used to use . . . ; students leaving home to go to college would receive a typewriter as a gift . . . (paragraph 1)  
even medical records used to be written by hand. (paragraph 2)

businesses would sometimes take really important documents to a professional printer . . . (paragraph 3)

early models would stop working when the keys were hit too fast . . . (paragraph 4)

**G (p. 64)**

1. used to/would; 2. used to/would; 3. used to/would; 4. used to; 5. used to/would; 6. used to; 7. used to/would; 8. used to

**I (p. 64)**

Everything from watches to radios <sup>1</sup>**used to** ~~would~~ be made of Bakelite. But what is Bakelite, and where does it come from? Bakelite was the very first plastic, and it was invented by Leo Baekeland, who was born in Belgium in 1863. As a boy, he <sup>2</sup>**used to love/loved** ~~would love~~ chemistry and physics. He <sup>3</sup>**used to/would** ~~used~~ study for hours every day and do science experiments at home. At 24, he was already teaching at a university. That's also when he began his career as an inventor. Baekeland wanted to invent something to cover electric wires safely. Without some sort of covering, electrical wiring ~~would~~ <sup>4</sup>~~to~~ often cause fires. Every day, he <sup>5</sup>**used to/would** ~~use to~~ go into his basement and try something new. It took him almost 10 years, but he finally came up with a substance that worked. He called it Bakelite.

**REFLECT**

**B (p. 67)**

**Noun:** bacteria, drawback, limitation, wire

**Verb:** adapt, break down, preserve, settle, take off, transform

**Adjective:** critical, fake, flexible, fragile, luxury, nutritious, scarce, stiff

**Adverb & other:** ironically, tightly



## UNIT 4 ANSWER KEY

### CONNECT TO THE TOPIC (p. 69)

1. *Answers will vary. Possible answer:* A mobile weather station could help warn people in remote areas about extreme weather events. This could help emergency workers to save lives.
2. *Answers will vary.*

### WATCH

#### A (p. 70)

*Answers will vary. Possible answer:* sustainable

#### B (p. 70)

1. c; 2. b; 3. c

### PREPARE TO READ

#### A (p. 71)

1. pursue; 2. assertive; 3. credit; 4. remarkable;  
5. disrupt; 6. ambitious; 7. determined;  
8. insurance; 9. secure; 10. network

### READ

#### B (p. 75)

1. b; 2. a

#### C (p. 75)

1. markets; 2. opportunity; 3. taxi; 4. offered;  
5. wallet; 6. account

#### D (p. 75)

1. F; 2. T; 3. F; 4. T; 5. T; 6. NG; 7. F; 8. F; 9. NG; 10. T

#### E (p. 76)

1. X; 2. √; 3. √; 4. √; 5. X; 6. √

#### F (p. 76)

*Underlined information should be highlighted.  
Highlighted portions may vary:*

1. **Evidence against claim:** Gutiérrez is a Colombian businessman who has already founded one successful company. (paragraph 1)
2. **Evidence for claim:** He went on to get a business degree . . . (paragraph 2)
3. **Evidence for claim:** he decided to leave his secure job . . . "My father was scared," says

Gutiérrez. "He was terrified that I was leaving this stable job" (paragraph 3)

4. **Evidence for claim:** new businesses, particularly online businesses and mobile apps, were beginning to disrupt markets such as air travel and taxis. . . he decided to leave his secure job in the United States and start a ride-hailing service in Colombia, which uses an app, much like Uber. (paragraph 3)
5. **Evidence against claim:** they founded Tappsi, a business that quite quickly became successful, serving 1.6 million riders a month. Less than a year later, someone offered to buy the company for a million dollars, . . . But Gutiérrez was firm, eventually selling the company for much, much more. (paragraph 4)
6. **Evidence for claim:** he decided to start a new business, Tpage, a mobile wallet that drivers, farmers, and anyone else can use to send and receive money digitally. (paragraph 6)

### PREPARE TO READ

#### A (p. 77)

1. gap; 2. setback; 3. harmful; 4. appeal to;  
5. texture; 6. contemplate; 7. current; 8. supply;  
9. investor; 10. supportive

### READ

#### A (p. 78)

c

#### B (p. 80)

- a. 2; b. 4; c. 6; d. 1; e. –; f. 5; g. 3

#### C (p. 81)

- a. 4; b. 6; c. 3; d. 5

#### D (p. 81)

*Underlined information should be highlighted as evidence.*

1. First, she started a company focused on science education. / With another scientist, . . . she founded a company, Shiok Meats, in 2018. (paragraphs 1 and 5)
2. Sriram took business courses while she considered the best place to start. (paragraph 2)

3. To solve this problem, some entrepreneurs are disrupting the market with plant-based “meat.” . . . She thought she had a better idea that would solve all of these problems for the seafood market—real seafood grown in a laboratory from the stem cells of real animals. . . . She realized that she had found her gap in the market. . . . (paragraph 4)
4. Their goal was to grow “clean” shrimp from shrimp stem cells in a laboratory. (paragraph 5)
5. With another scientist, Ka Yi Ling, and the support of investors and the Singapore government, she founded a company, ShioK Meats, in 2018. . . . The company, the first “clean” seafood company in the world, spent two years developing its first product, as well as raising almost \$8 million from investors. (paragraph 5)

## WRITE

### A (pp. 82–83)

talent and ability (paragraph 1)

a strong desire to succeed (paragraph 2)

do not give up (paragraph 3)

great focus and discipline (paragraph 4)

### B (p. 83)

1. talent/ability

2.

Characteristic of successful athlete	Name of athlete	Evidence from the model essay
a strong desire to succeed	Haile Gebrselassie	ran through pain in first marathon without proper equipment
do not give up	Kipchoge Keino	ran even though he was experiencing pain from gallstones; ran the last few miles to race when bus was stuck
great focus and discipline	Tatyana McFadden	training difficult and intense, even hard for athletes with full use of their legs

### C (p. 84)

a. 2; b. 3; c. 1

### D (pp. 84–85)

*Answers will vary. Possible answers:*

1. Word changes: great → exceptional  
Rephrase: their hunger for success → have a strong desire to succeed.  
Change in structure: second sentence changed from a clause with *when* to a compound sentence connected with *and*
2. Word changes: top athletes → The best athletes; practice with great concentration and consistency → have great focus and discipline  
Rephrase: It’s not always fun → it is difficult, boring, and painful; recognize that it is necessary → are willing to practice for hours  
Change in structure: second sentence changed order of clauses

### E (p. 85)

*Answers will vary. Possible answers:*

1. Haile Gebrselassie is a famous runner who started his career at the age of 15, when he entered a marathon. He had to keep it a secret because his father didn’t want him to run.
2. Keino took a big risk when he ran the 5,000-meter race because his doctor warned him not to do it. He did it anyway and came in second.
3. When she was eight years old, she began her athletic career with an intense training program. The training exercises for her upper body are so difficult that they would be hard for athletes without a disability.

### F (p. 85)

1. Haile Gebrselassie, a world-famous Ethiopian runner, started running against his father’s wishes. (paragraph 2)  
**Rewrite:** Haile Gebrselassie, who is/was a world-famous Ethiopian runner, started running against his father’s wishes.
2. Kipchoge Keino, a Kenyan long-distance runner, experienced several problems at the Mexico City Olympics in 1968. (paragraph 3)  
**Rewrite:** Kipchoge Keino, who is/was a Kenyan long-distance runner, experienced several problems at the Mexico City Olympics in 1968.

3. He was suffering from gallstones, a dangerous and painful medical condition, but he ran in the 10,000-meter race anyway. (paragraph 3)

**Rewrite:** He was suffering from gallstones, which is a dangerous and painful medical condition, but he ran in the 10,000-meter race anyway.

4. Tired from the earlier race, he decided to sleep an extra hour.

**Rewrite:** Keino, who was tired from the earlier race, decided to sleep an extra hour.

#### G (p. 86)

1. Admired all over the world, Kipchoge retired in 1973.
2. Supported partly by the government, Shiok Meats will offer products to the public in just a few years.
3. Andrés Gutiérrez, an entrepreneur from Colombia, has received a major new round of funding.
4. Motivated by a strong desire to make the world a better place, Sriram started her company with a dream.
5. Funded by several big investors, Shiok Meats has a bright future.
6. Gutiérrez's grandmother, a farm owner in Colombia, helped him get started.

#### H (p. 86)

<sup>1</sup>**Former Amazon CEO Jeff Bezos, who is the richest person in the world**, has a net worth that is about \$150 billion. <sup>2</sup>**Bezos, born**

#### **in Albuquerque, New Mexico,/Born in**

**Albuquerque, New Mexico, Bezos** graduated from Princeton University with a degree in electrical engineering. He wrote the business plan for Amazon on a trip from New York to Seattle, and then his parents invested \$300,000 to get the company started. <sup>3</sup>**Amazon, was originally planned as just a book company,/Originally planned as just a book company, Amazon** quickly expanded to other products and services. The business, which today is the world's largest online sales company, did about \$90 billion of sales in 2019. In 1993, Bezos bought <sup>4</sup>**the Washington Post, which was a troubled newspaper at the time.** <sup>5</sup>**Rescued by Bezos, the Post** has become another of his success stories.

#### I (p. 87)

*Answers will vary but other factors might include:* have good luck, have good timing, recognize a gap in the market, believe in yourself, have available capital, have a good network, have a good team, be curious, have ambition, have resilience, be willing to take a risk, love your work, be fearless

### REFLECT

#### B (p. 89)

**Noun:** credit, gap, insurance, investor, network, setback, supply, texture

**Verb:** appeal to, contemplate, disrupt, pursue

**Adjective:** ambitious, assertive, current, determined, harmful, remarkable, secure, supportive

## UNIT 5 ANSWER KEY

### CONNECT TO THE TOPIC (p. 91)

1. *Answers will vary.*
2. *Answers will vary.*

### WATCH

#### A (p. 92)

The video is about laughter—how human children and chimps (primates) laugh in similar ways.

#### B (p. 92)

**Humans:** 2, 4, 5

**Other animals:** 3, 4, 5

### PREPARE TO READ

#### A (p. 93)

1. distinguish; 2. (have) evolved; 3. industrialized;
4. primarily; 5. origin; 6. innate; 7. have emerged

### READ

#### A (p. 94)

1, 4, 5

#### B (p. 97)

Laughter has a primarily social function.

*Students should highlight the following sentences.*

Paragraph 2: First of all, we are not the only species that laughs.

Paragraph 3: Most scientists agree that laughter has been part of social relationships from the very beginning.

Paragraph 4: They believe there are actually two types of laughter, and these emerged at different times in human history.

Paragraph 5: Robert Provine, an expert on laughter, believes that involuntary laughter kept—and still keeps—social relationships positive and friendly in social groups.

Paragraph 6: Unlike involuntary laughter, it is under our control and sounds almost, but not exactly, the same.

Paragraph 7: Although these two types of laughter sound similar, we are able to recognize the difference; voluntary laughter sounds a bit fake.

Paragraph 8: Bryant found, though, that age and location of participants affected how easily they could distinguish between voluntary and involuntary laughter.

#### C (p. 97)

1. Gervais & Wilson; 2. Provine; 3. Bryant; 4. —;
5. Gervais & Wilson; 6. Bryant; 7. —; 8. Bryant

#### D (p. 97)

1. F; 2. F; 3. T; 4. F; 5. NG; 6. T; 7. T; 8. NG

#### E (p. 98)

b

#### F (p. 98)

1. [People] make unusual sounds, they can't catch their breath, they can't speak, and they curl their bodies into strange shapes.
2. two types of laughter
3. Laughter is a signal that says, "We are all friends; there is no trouble here."
4. Although these two types of laughter sound similar, we are able to recognize the difference.
5. people

#### Reflect (p. 98)

*Answers will vary. Possible answers:*

1. involuntary; 2. voluntary; 3. involuntary or voluntary; 4. involuntary or voluntary

### PREPARE TO READ

#### A (p. 99)

1. c; 2. a; 3. a; 4. c; 5. c; 6. b; 7. c; 8. b; 9. a; 10. c

#### Reflect (p. 99)

1. F Laughing for 15 minutes burns between 10 and 40 calories, according to the study "Energy expenditure of genuine laughter" by M.S. Buchowski.
2. T The study "Daily occurrence of laughter" by R.A. Martin suggests that adults laugh an average of 17.5 times per day.
3. F If this was true, then children awake 12 hours per day would be laughing at least once every one to two minutes from sunrise till sunset.
4. T The study "Social laughter is correlated with an elevated pain threshold" by R.I.M. Dunbar shows that laughing increased pain resistance.

5. T When you try to tickle yourself, the cerebellum predicts the sensation, and this prediction is used to cancel the response of other brain areas to the tickle.
6. F While kea birds have been shown to make a noise similar to laughter, it is not because they find something funny. It is a type of bird call.

## READ

**A** (p. 100)  
1, 3, 5

**B** (p. 102)  
*Students should highlight the following sentences:*  
Paragraph 2: He had an unusual but effective way of collecting data.  
Paragraph 3: He concluded that like the laughter that evolved among early humans, people today use laughter to form and strengthen social bonds.  
Paragraph 4: When Provine began to look closely at his data, he found interesting patterns in who laughed most and when they laughed.  
Paragraph 5: Laughter plays a significant role in relationships.  
Paragraph 6: Yet, even this kind of laughter turns out to be social.  
Paragraph 7: Laughter is clearly powerful, but that power can also be used in negative ways.  
**Main idea of the whole article:** Laughter has a primarily social function.

**C** (p. 102)  
1. men; 2. men; 3. men; 4. women

**D** (p. 103)  
1. c; 2. b; 3. c; 4. a; 5. b; 6. c; 7. a; 8. b

**E** (p. 103)  
*Answers will vary. Possible answers:*  
1. men get more laughs than women  
2. your response is also a signal to others that you are enjoying yourself and an invitation to join you in the fun  
3. when you laugh at other people

## Reflect (p. 103)

*Answers will vary. Possible answers:*

- This shows that humorous content helps older people improve their memory.  
*A better claim might be:* This shows that humorous content may be more memorable.
- This shows that laughter increases as the size of the group increases.  
*A better claim might be:* This shows that laughter is increased when humor is shared with another person.

## WRITE

**A** (pp. 104–105)  
1. how age affects our ability to distinguish between involuntary and voluntary laughter  
2. yes

**B** (p. 105)  
a. 4; b. 2; c. 5; d. 1; e. 4; f. 3; g. 5; h. 6; i. 2; j. 3

**C** (p. 106)  
1. **Highlighted as reference:** The article *The Origins of Laughter*  
**Underlined as what article is about:** the origins of human laughter  
2. 4, 5, 6, 7, 8  
3. The article concludes that laughing has always had a social function.

**D** (p. 107)  
1. 2, 3, 4, 6  
3. *Answers will vary. Possible answers:*  
The article *Why We Laugh* discusses the social functions of laughter.  
The author focuses on the research of Robert Provine, who listened to people's laughter during conversations.  
He was surprised to find out that most laughter has a social function and is not in response to anything funny.  
He also found some interesting patterns: Speakers are more likely than their listeners to laugh at something they say, and people are more likely to laugh in response to men than to women.

Finally, he found that even when something is funny, we are most likely to laugh when we are with other people.

From the article, we can conclude that laughter is a way of keeping relationships peaceful and friendly.

**E** (p. 107)

**1. Noun + participial phrase:** research **done in the past 30 years**

**2. Nouns + prepositional phrases:** *Possible answers:* Summary **of previous research**; Origins **of Laughter**; the origins **of human laughter**; Research **by Robert Provine**; Studies **by Matthew Gervais and David Sloan Wilson**; two types **of human laughter**; study **by Greg Bryant**; people **from all cultures**; people **from less industrialized communities**; those **from more industrialized ones**

**3. Noun + infinitive phrase:** our ability **to distinguish between involuntary and voluntary laughter**; **Noun + participial phrase:** the new research **described here**

**4. Noun + participial phrase:** *Possible answers:* recordings **used in the study** reviewed **in *The Origins of Laughter*.**

**F** (p. 108)

*Answers will vary. Possible answers:*

**1.** Researchers listened to laughter **between friends**.

**2.** Provine observed people **sitting in cafes**.

**3.** What's the most important quality **of a good friend**?

**4.** The results **described in this article** will change the field.

**5.** Laughter is a great way **to relieve stress and stay healthy**.

**6.** I usually laugh when I hear a joke **about animals**.

**7.** I am interested in articles **written by my professors**.

**8.** I had the opportunity **to meet my favorite author**.

## REFLECT

**B** (p. 111)

**Noun:** bond, episode, origin

**Verb:** assume, bully, distinguish, emerge, engage in, evolve, tease, turn out

**Adjective:** adorable, apparent, contagious, humorous, industrialized, innate, threatening

**Adverb and other:** primarily, purely



## UNIT 6 ANSWER KEY

### CONNECT TO THE TOPIC (p. 113)

- Answers will vary. Possible answer: The photo shows a city with both newer and older areas. The park looks like it was built a long time ago, but the towers are very modern.
- Answers will vary.

### WATCH

#### B (p. 114)

- F; 2. T; 3. F; 4. F; 5. T

#### C (p. 114)

- 2, 4, 5

### PREPARE TO READ

#### A (p. 115)

- c; 2. c; 3. b; 4. c; 5. b; 6. a; 7. a; 8. c; 9. b; 10. a

### READ

#### B (p. 119)

- 3; b. –; c. 5; d. 2; e. 4

#### C (p. 119)

c

#### D (p. 119)

Animals that have changed their behavior while living in the city	Animals whose physical characteristics have evolved while living in cities
peregrine falcons	anoles (lizard)
foxes	cliff swallows
crows	white-footed mice
juncos	

#### E (p. 119)

- 2, 3, 5, 6, 7, 8

#### F (p. 120)

(C) Opponents of the National Park City maintain that most other cities simply don't have enough green space to make the program worthwhile. (A) Although it's true that the amount of park space in cities varies widely, (R) even small steps toward preserving and expanding these spaces will lead to improvements in human health.

#### G (p. 120)

Paragraph 1

(C) Although many scientists see this as a negative development (A)—and, indeed, some animals do not survive these changes—(R) surprisingly, many animals thrive in urban areas.

Paragraph 5

(C) Some experts maintain that this is a negative development for species because it reduces gene diversity, and diversity keeps a species strong. (R) However, new research suggests that these smaller gene pools may make it easier for beneficial traits to spread.

### PREPARE TO READ

#### A (p. 121)

- import; 2. contaminate; 3. vertical; 4. impractical; 5. yield; 6. potential; 7. critic; 8. integrate; 9. calculate; 10. harvest

### READ

#### A (p. 122)

Answers will vary. Possible answers:

- Indoor farms in the city
- They provide fresher food.
- They cannot produce enough to feed everyone.

#### B (p. 124)

a, c, d, f, h

#### C (p. 125)

- T; 2. F; 3. T; 4. NG; 5. T; 6. F; 7. NG; 8. NG

#### D (p. 125)

- land; 2. yields; 3. pesticides; 4. carbon footprint; 5. range; 6. energy; 7. environment; 8. cost

### WRITE

#### A (pp. 126–127)

Oslo's restriction on cars has been successful.

#### B (p. 127)

- By restricting the use of cars, cities like Oslo, Norway have significantly improved residents' health and well-being.
- Answers will vary. Possible answers: to reduce air pollution, to encourage pedestrian traffic

- 3.** *Answers will vary. Possible answers:* a reduction in air pollution, a reduction in private vehicles in the city
- 4.** Opponents of the changes objected that without cars, businesses in the city would suffer. To refute this, the writer points out that this hasn't happened.

**C (p. 128)**  
3

- D (p. 128)**  
*Answers will vary. Possible answers:*
- a.** 1. stressful; **2.** families; **3.** aggressive  
**b.** 4. Cars; **5.** short wings; **6.** genes; **7.** species  
**c.** 8. parks; **9.** populations; **10.** mates; **11.** spread

- E (p. 129)**
- 1.** Consequently, many cities have begun to question whether we really need all of these cars. (effect) independent clause
- 2.** As a result, air pollution often covers the city. (effect) independent clause
- 3.** due to the reduction in vehicle traffic (cause) noun phrase
- 4.** Thanks to these changes (cause) noun phrase

- F (p. 129)**  
*Answers will vary. Possible answers:*
- 1.** Thanks to; **2.** because of; **3.** Therefore;  
**4.** as a result of; **5.** Consequently; **6.** due to

- G (p. 130)**
- 1.** Many people have left farms because of new job opportunities in cities.
- 2.** There is generally more food available in cities. Consequently, many animals have left their wild homes.
- 3.** Life is less stressful in the city. As a result, many urban animals have larger families than those that live in the wild.

- 4.** Thanks to these helpful mutations, animals can survive more easily in the city.
- 5.** Transporting food from farms to cities uses a lot of energy. Therefore, it makes sense to move farms inside cities.
- 6.** Because of their greater productivity, modern farms can feed a lot more people than they could in the past.
- 7.** It's difficult to grow large, heavy vegetables on vertical farms. As a result, most of these farms grow smaller, lighter vegetables.
- 8.** Due to the high cost of this technology, its use is not yet widespread.

- H (p. 130)**  
*Answers will vary. Possible answers:*
- 1a.** Animal behavior is changing as a result of their urban habitat.
- b.** More animals live in urban instead of wild habitats. As a result, their behavior has changed.
- 2a.** The contamination of nearby water is due to the use of fertilizer and pesticides.
- b.** Fertilizer and pesticides use has increased. As a result, there is more contamination of nearby water.
- 3a.** There are now more social spaces as a result of the restriction of cars in Oslo.
- b.** There was too much pollution in Oslo. Therefore, city officials decided to restrict cars in the central district.

## REFLECT

- B (p. 133)**
- Noun:** circumstances, critic, gene, potential, predator, surface, territory, trait, yield
- Verb:** calculate, contaminate, harvest, import, integrate, thrive
- Adjective:** aggressive, impractical, random, suited to, vertical



## UNIT 7 ANSWER KEY

### CONNECT TO THE TOPIC (p. 135)

1. They are on the beach in Bali. *Other answers will vary.*
2. *Answers will vary.*

### WATCH

#### A (p. 136)

Problems: 1, 3

Benefits: 1, 2

#### B (p. 136)

1. three to five; 2. protecting; 3. urban; 4. Walking into a forest; 5. personality; 6. conservation

### PREPARE TO READ

#### A (p. 137)

1. description; 2. really wanted to; 3. roads, bridges, and services; 4. people who are similar to them; 5. who might come; 6. showed; 7. honest and real; 8. smooth and constant; 9. extremely beautiful; 10. deserving of

### READ

#### A (p. 138)

*Answers will vary. Possible answer:*  
A lot of tourists began to arrive.

#### B (p. 141)

1. income; 2. expensive; 3. platforms; 4. influencers; 5. sincere; 6. tool

#### C (p. 141)

1. T; 2. NG; 3. F; 4. F; 5. T; 6. NG; 7. T; 8. T

#### D (p. 141)

- 1, 4, 6

#### E (p. 142)

1. positive; 2. positive

#### F (p. 142)

1. remarkable, thrilled, incredible; 2. Without a doubt, clearly; 3. communities like yours

### Reflect (p. 142)

*Answers will vary. Possible answers:*

1. reliable income, jobs, infrastructure
2. There was a 14 percent increase in tourism, and there is still a steady stream of tourists today.
3. *Answers will vary.*

### PREPARE TO READ

#### A (p. 143)

1. c; 2. a; 3. c; 4. b; 5. b; 6. c; 7. c; 8. a; 9. b; 10. c

### READ

#### A (p. 144)

*Answers will vary. Possible answer:*

The writer's purpose is to convince readers of the negative impact of social media on tourism.

#### B (p. 146)

- a. 4; b. 3; c. 1; d. 6; e. 5; f. 2

#### C (p. 147)

2

#### D (p. 147)

1. Hanoi, Vietnam; 2. Canada; 3. Trolltunga, Norway; 4. Delta Lake, Wyoming; 5. Zhangjiajie Canyon, China/Hunan, China

#### E (p. 147)

1. damage, ruining, distressing, destroying;
2. Unfortunately, Shockingly

### Reflect (p. 147)

*Answers will vary. Possible answers:*

1. One example: Influencers take risks on Hanoi train tracks.
2. Two examples: Tourists have damaged an ecosystem in Wyoming. Visitors destroyed a flower farm.

### WRITE

#### A (pp. 148–149)

The writer has a positive point of view about tourism in Oaxaca.

**B (p. 149)**

Answers will vary. Possible answers:

- Benefit: protects the environment and its biodiversity  
Evidence: Huatulco National Park protects nature.
- Benefit: protects cultural heritage  
Evidence: income for artists and guides to continue these traditions
- Benefit: improves infrastructure  
Evidence: better roads and Internet for everyone, not just tourists

**C (p. 150)**

- positive; 2. wonderful/precious natural;
- valuable; 4. better; 5. reliable

**D (p. 150)**Paragraph 2

(C) Some people complain that the tourists are disrespectful and behave badly. (A) While that's true of some tourists, (R) they are a minority. Without tourists, we might not have this wonderful resource. Indeed, we might have factories there instead.

Paragraph 3

(C) The increase in tourism has brought some unwelcome changes; (A) the price of housing has increased in the city center because of tourist hotels. (R) However, most local people accept this. The artists know that the tourists provide them with a market for their work. Tourism also provides a steady income for people who act as guides.

**E (p. 150)**

- b, And indeed, it was very successful, but
- c, It's true that we need tourists, yet
- a, Infrastructure is certainly important, but

**F (p. 151)**

Answers will vary. Possible answers:

- tourism also brings economic opportunities
- but most people agree that a few visitors can't hurt such a large place
- However, this would cause serious economic problems for many places

**G (p. 151)**

- d; 2. b; 3. c; 4. a

**H (p. 152)**

- An; 2. The; 3. The; 4. a; 5. The; 6. a; 7. the; 8. the;
- the

**I (p. 152)**

There is <sup>1</sup>~~the~~ **a** museum in Turkey for people who like to visit strange sites. The museum displays local pottery, but it also has <sup>2</sup>~~the~~ **a** collection of hair. There is an old story that a woman who lived in this town wanted to leave <sup>3</sup>~~the~~ **a** friend with something that would help him remember her. So, she gave him <sup>4</sup>~~the~~ **a** piece of her hair. The man hung the hair up in his pottery shop and told the story to his visitors. The women who visited his shop loved <sup>5</sup>~~a~~ **the** story, so they left him pieces of their own hair. Soon <sup>6</sup>~~a~~ **the** man had so many pieces of hair that he turned his shop into a museum. Inside the museum, there is <sup>7</sup>~~the~~ **a** pair of scissors so that visitors can add a piece of their own hair to <sup>8</sup>~~a~~ **the** collection.

**REFLECT****B (p. 155)**

**Noun:** account, infrastructure, peer, shot

**Verb:** capture, make a living, penetrate, prohibit, replicate, reveal, ruin, show off

**Adjective:** distressing, eager, inferior, potential, sincere, steady, stunning, worthy of

## UNIT 8 ANSWER KEY

### CONNECT TO THE TOPIC (p. 157)

1. *Answers will vary. Possible answer:* a fear of failure, stress, anxiety, injuries
2. *Answers will vary.*

### WATCH

#### A (p. 158)

It may be possible to run the marathon in less than two hours.

#### B (p. 158)

1. T; 2. F; 3. T; 4. F

#### C (p. 158)

1. d; 2. a; 3. b

### PREPARE TO READ

#### A (p. 159)

1. stimulate; 2. explosive; 3. absorb; 4. profile;
5. dominate(s); 6. peak; 7. resistance;
8. distribution; 9. crucial; 10. endurance

### READ

#### A (p. 161)

c

#### B (p. 163)

- a. 5; b. 3; c. –; d. 6; e. –; f. 2; g. 4

#### C (p. 163)

*Words in parentheses are possible key words.*

1. T (2008); 2. T (Phelps/shoulders); 3. F (Kalenjin);
4. NG (Kenyan/Kipchoge); 5. NG (muscle fibers);
6. T (energy); 7. F (Mäntyranta); 8. T (profiles)

#### D (p. 164)

1. triangle; 2. resistance; 3. Long-distance;
4. Slow-twitch; 5. Fast-twitch; 6. fast-twitch;
7. lung; 8. mutation

### PREPARE TO READ

#### A (p. 165)

1. g; 2. j; 3. a; 4. i; 5. c; 6. d; 7. h; 8. b; 9. e; 10. f

#### B (p. 165)

- a. 1. elite; 2. apparel; 3. dimensions
- b. 4. monitor; 5. indicator
- c. 6. frontier; 7. momentum

### READ

#### A (p. 166)

b

#### B (p. 168)

- 1, 2, 5, 6

3 and 7 are not stated in the article. 4 is stated but is not a main idea.

#### C (p. 169)

*Words in parentheses are possible key words.*

1. long-distance (hydrated); 2. half-marathon (Kibiwott Kandie); 3. virtual reality/VR (skiers);
4. Jesse Owens (100-meter); 5. cycling/cyclists (aerodynamic); 6. 0.62 seconds (Bolt, Owens)

#### D (p. 169)

1. NG; 2. F; 3. T; 4. T; 5. NG; 6. T

### WRITE

#### A (pp. 170–171)

*Answers will vary. Possible answer:*

Athletes with genetic differences should be allowed to compete in the Olympics.

#### B (p. 171)

1. All athletes must be permitted to compete in the Olympics because genetic differences do not clearly provide benefits and can't be controlled by an individual athlete.
2. a. We don't know enough to start choosing and excluding athletes on the basis of mutations.  
b. Mutations are natural. Athletes have no control over them.
3. However, we must accept the natural genetic diversity of the human body and allow all athletes to compete in the Olympics.

#### C (p. 172)

1. All athletes must be permitted to compete in the Olympics because genetic differences do not clearly provide benefits and can't be controlled by an individual athlete.
2. It is true that scientists have discovered some genetic differences that help certain athletes . . . Of course, competition should be fair. Everyone can agree that athletes who change their bodies

with drugs or technology will need to be banned from competition.

**3. a.** genetic difference; **b.** exclude; **c.** compete

**4.** The paragraph in the model essay would get higher scores because it has more complex sentences.

**D (p. 173)**

*Answers will vary. Possible answers:*

1. It is true that it is difficult for employees to get a lot done when they are working remotely.
2. In today's competitive world, it is crucial for children to begin their education as early as possible even if it is stressful.
3. People will always resist changing their behavior, so we need laws that require them to do so.

**F (p. 173)**

*Answers will vary. Possible answers:*

Sample answers for test question 1

It is true that it is difficult for employees to get a lot done when they are working remotely.

Supporting idea 1: Too many distractions

Detail: family members

Detail: household chores

Supporting idea 2: Not as much pressure

Detail: Boss is not around.

Detail: fewer meetings

**G (p. 174)**

*Answers will vary. Possible answers:*

1. there are too many distractions at home
2. there is too little pressure
3. television, video games, and even the refrigerator
4. work harder and take fewer breaks
5. they think it is more convenient
6. there are fewer distractions and more pressure to work hard

**H (p. 174)**

*Answers will vary. Possible answers:*

When employees work at home, there are many distractions. If they have a family, the children often want their attention. They want to play, have a snack, or need help with their homework. However, even if employees are alone, there are distractions such as television, video games, and even the refrigerator. It is very easy to

stop working and start doing something else that is more fun.

**I (p. 174)**

*Employee* is repeated too often. Students can substitute with *worker, colleague, staff, or people* or use referents like *he, she, they, or them*.

**J (p. 175)**

All athletes must be permitted to compete in the Olympics

people who are taller than seven feet should not be able to play in basketball games

people with really long arms will not be allowed to take part in swimming events

athletes who use drugs to change their bodies will need to be banned

**K (p. 175)**

1. be able to/be allowed to;
2. are going to;
3. be able to/be allowed to;
4. be able to;
5. am going to;
6. be able to;
7. are going to/have to/need to;
8. are going to/are supposed to/have to/need to

**L (p. 176)**

When I was young, I used to <sup>1</sup>~~can~~ **be able to** run 10 miles with no problem at all. Now, it's difficult for me to run more than two miles without my knees hurting. Now that I'm retired, I know that I'm supposed to <sup>2</sup>~~could~~ **be able to/be allowed to** relax and enjoy life, but I really miss running long distances. I think I'm going to <sup>3</sup>~~must~~ **have to/need to** try out a different exercise plan that is a little less stressful. I think I still might <sup>4</sup>~~could~~ **be able to** do something such as biking or swimming—an activity where I don't use my knees so much. I have to talk to my doctor, and I think I'll <sup>5</sup>~~must~~ **have to/need to** do it soon. My knees are killing me.

**REFLECT**

**B (p. 177)**

**Noun:** apparel, dimensions, distribution, endurance, frontier, indicator, momentum, peak, profile, resistance

**Verb:** absorb, bounce, dominate, drain, have to do with, monitor, stimulate

**Adjective:** crucial, elite, explosive