

Reading Explorer 5 Unit 3 Lesson B

DIRECTIONS: Choose the best answer for each question.

Goalkeepers for the Planet

[A] In 2015 at the United Nations, world leaders adopted 17 Sustainable Development Goals aimed at reducing poverty, inequality, and other global problems by 2030. Such objectives have long been championed by philanthropists¹ Bill and Melinda Gates. In 2017, the Gates Foundation launched Goalkeepers, an initiative to spur action² and track progress toward the UN goals. Its 2018 status report says there have been "mind-blowing improvements in the human condition." The report also calls for more investment and innovation to ensure this progress continues.

[B] Susan Goldberg, editor-in-chief of *National Geographic Magazine*, met with Bill and Melinda Gates for a joint interview on the report, which was released to the public on September 18, 2018.

[C] **I've just read the Goalkeepers report. Why did you decide to start doing this?**

Melinda Gates: Because we think that the news isn't really out there - the news that the world has made this incredible progress, this increase in lives saved, the reduction in poverty. The UN set these amazing goals for the future to help us continue to reduce poverty, and we want to make sure that we hold people accountable for that progress and really inspire the next generation of leaders who are going to take these tasks on.

[D] **What are you seeing in different countries? Who's doing a great job?**

Bill Gates: Even a very poor country can do a good job on health, can do a good job on agriculture, on education, and that provides a lot of hope because you can copy what's being done there. Rwanda has been a big outlier in the quality of health services. Ethiopia, on agriculture, is growing over 5 percent a year. In education, Vietnam is one we talk about because they're so far ahead of where you'd expect given their wealth. But it's when you get those three things together - health, education, agriculture - that eventually these countries can become self-sufficient.

[E] **MG:** One of the things that's also encouraging: Rwanda is a very small country [in population], Ethiopia is the second largest on the continent of Africa - but they have learned the lessons of what has helped people make progress from around the world. So they're looking at what happened in Asia in agriculture, how did Brazil decrease the stunting³ rate [among malnourished children] so phenomenally across a very large country with lots of poverty.

[F] **When you think about learning from one another, I was struck by the example from Vietnam, where you've got 15-year-olds who are doing as well on international tests in school as people from the United Kingdom or from the United States. What are the lessons from Vietnam that can translate across other countries?**

BG: It's a really new thing to try and get into the amount of learning. The agenda for poor countries up until now has largely been to get the kids into school - and attendance rates have gone up a lot, for girls and boys. The biggest missing piece still is how much knowledge they're gaining. A few countries, by training the teachers the right way and bringing the right material into the classroom, have really achieved learning way beyond what you might expect.

[G] **MG:** When you look back at the UN goals that were initially set in 2000, one of the goals was to get kids into school, and that has essentially been achieved, particularly at the primary level and quite a bit at the secondary level. So it's neat to see a goal achieved, but now with this next set of goals, it's about how to get the depth of learning and the education right.

[H] **Thinking about Africa: How young it is, how many young people there are, is both a huge challenge and a great opportunity. Can you talk a little bit about that?**

BG: The African continent today is about a billion people out of the seven billion on Earth, and as this century goes forward, over half the young people in the entire world will be there. With those people moving into the job market, if the right investments are made - stability, education, health - Africa will have growth and innovation, far more than lots of other places. If, on the other hand, we don't take care of the HIV crisis, then you'll just have more people who will get infected. If you don't have the right conditions, then the young people, particularly the men, can add to that instability. So Africa definitely hangs in the balance.⁴

[I] **Melinda, family planning has been one of the issues that you're most involved in. Can you talk to me a little about that?**

MG: Family planning is crucial anywhere, in any community around the world, because if a woman can decide if and when to have a child, she's going to be healthier and her child is going to be healthier. That's one of the longest-standing pieces of global health research we have ... [If parents] can space the births of those children, they can then feed them, they can educate them, the woman can work and contribute her income to the family. It changes everything in the family dynamic, and it changes the community, and ultimately you get these country-level effects where it's good for everybody.

[J] **You've gone all over the world and seen the problems up close. If you could wave a magic wand⁵ and fix just one thing, what would it be?**

BG: The development of children. Today more than half the kids in Africa never fully develop physically or mentally because of malnutrition, their diet, and the diseases they face. With research on the human gut microbiome,⁶ we're gaining an understanding of stunting, why they don't grow. I'm super excited that by the end of the decade we expect to have cheap interventions so those kids will fully develop. That means all the investments you make in their education, wanting to benefit from their productivity, will work far better. So if there was just one thing, it's the intervention to stop malnutrition.

¹ A **philanthropist** is someone who freely gives money and help to people in need.

² If something **spurs** you into **action**, it causes you to do something.

³ The word **stunting** refers to the impaired growth and development that children experience from poor nutrition and poor health.

⁴ If something **hangs in the balance**, no one is sure what will happen to it in the future.

⁵ A **magic wand** is a long thin rod that magicians or fairies wave when they perform tricks, sometimes to make a wish come true.

⁶ The **human gut microbiome** refers to the beneficial microbes that live in the human digestive system.

- ____ 1. The main point of the Goalkeepers report is to ____.
- highlight the problems of poverty and inequality
 - raise awareness for philanthropic investment
 - celebrate the work that Bill and Melinda Gates have done
 - track progress and call for further action to achieve UN goals

- _____ 2. From paragraph B, which of the following sentences about the Sustainable Development Goals is true?
- a. They were created by Bill and Melinda Gates.
 - b. They are personal goals for Bill and Melinda Gates.
 - c. They are meant to improve global living standards.
 - d. They are only applicable to Africa.
- _____ 3. What is the purpose of paragraph C?
- a. to give an example of how the Goalkeepers report can be used
 - b. to emphasize that the Goalkeepers report is a global project
 - c. to explain the motivation behind the Goalkeepers report
 - d. to show the planning that went into the Goalkeepers report
- _____ 4. In paragraph D, which was NOT given as a factor that is needed for developing countries to become self-sufficient?
- a. health
 - b. political stability
 - c. education
 - d. agriculture
- _____ 5. What does the interviewer find surprising about Vietnam?
- a. the quality of their health care services
 - b. how well the students score on international tests
 - c. how small the population is given the land size
 - d. the high school attendance rates of female students
- _____ 6. In paragraph G, what does Melinda Gates mean by *it's neat to see a goal achieved*?
- a. They achieved the goal in an orderly manner.
 - b. This was the only goal that was achieved.
 - c. It was a clear goal and a clever solution.
 - d. It's nice to see that they have achieved the goal.
- _____ 7. In the first sentence of paragraph H, what does *it* refer to?
- a. thinking
 - b. a challenge
 - c. Africa
 - d. an opportunity
- _____ 8. In paragraph H, what word can be used to replace *on the other hand*?
- a. obviously
 - b. however
 - c. therefore
 - d. additionally
- _____ 9. In paragraph I, we can infer that family planning would help families to ____.
- a. better manage their resources
 - b. have more children
 - c. gain access to better health care
 - d. control the spread of HIV

10. Based on the information in paragraph J, which of the following statements is Bill Gates most likely to agree with?
- a. Preventing malnutrition is the single most important issue to be tackled.
 - b. The world's problems will mostly be solved by the end of the decade.
 - c. No one has a magic wand; problems have to be fixed with hard work, one at a time.
 - d. It's more important to concentrate on the big problems first.

DIRECTIONS: Choose the best answer for each question.

Innovations to Revolutionize the Future of Medicine

[A] I would never have met Harriett were it not for our mutual friend, Linda. I'm a physician in Northern California; Harriett's a communications executive in New York City. Linda co-founded an online personal genomics company, to which Harriett and I each sent our genetic information for analysis.

[B] Linda introduced us after she saw that Harriett and I had something in common: a rare type of DNA, which meant we were distantly related. It turns out that we also share that genealogy with a prehistoric celebrity: Otzi the Iceman, whose 5,300-year-old frozen corpse was discovered in the Alps in 1991. For fun, I even started a Facebook group for people with the same DNA variant as Otzi and Harriett and me.

[C] I tell this story to make a point. Harriett and I met over a feat of science - mass-market, low-cost gene analysis - that once was unimaginable and now is commonplace. The convergence of digital technologies and social platforms made it possible for us to learn our genotypes and share what we found out with the online universe.

[D] Since then, we've seen an explosion of tech-driven innovations that have the potential to reshape many aspects of health and medicine. All around us, technologies from artificial intelligence (AI) to personal genomics and robotics are advancing rapidly, giving form to the future of medicine.

Rise of the Wearables

[E] Just a decade after the first Fitbit initially launched the "wearables" revolution, health tracking devices are ubiquitous. Most are used to measure and document fitness activities. In the future, these sensing technologies will be central to disease prevention, diagnosis, and therapy. They'll measure health objectively, detect changes that may indicate a developing condition, and relay patients' data to their doctors.

[F] Flexible, electronic medical tattoos and stick-on sensors can measure a person's heartbeat, breathing rate, and blood sugar levels, and then transmit the results via Bluetooth. It is a mobile form of vital sign tracking, but at a level once found only in an intensive care unit.

[G] Hearing aids or earbuds with embedded sensors will not only amplify sound but also track heart rate and movement. Such smart earpieces also could be integrated with a digital coach to cheer on a runner, or a guide to lend assistance to dementia patients.

[H] Smart contact lenses in the future will be packed with thousands of sensors, and designed to identify early indicators of cancer and other conditions. Lenses now in development may someday measure blood sugar values in tears, to help diabetics manage diet and medications.

[I] Implantable devices may include a radio-frequency ID chip under the skin that holds a patient's medical records, or a sensor that could continuously monitor blood chemistry. Devices that are swallowed in capsules will perform tasks within the digestive system, from delivering treatment to identifying foreign objects.

[J] And if we want to collect health data when no one's wearing a device? Engineers at MIT have modified a WiFi-like box so it can capture vital signs and sleep patterns of several people in the same residence.

AI, Machine Learning, and the "Virtualist"

[K] The widening array of digital tools paired with AI technology almost certainly will boost the accuracy and speed of a doctor's diagnosis. This will improve disease detection at early stages and raise the odds of successful treatment or cure. Apps and sensors can enable a phone to check for irregular heartbeats; software and a microphone can equip it to "listen" to a cough and diagnose pneumonia. To improve treatment of hypertension - a leading risk factor associated with early death - sensors now in development would take continuous blood pressure readings.

[L] Machine learning can also help improve diagnoses. Google researchers fed more than a quarter-million scans of patients' eyes into computers that could recognize patterns - and the technology "learned" to spot which patterns predict a patient has high blood pressure or is at increased risk for heart attack or stroke. In some comparisons, digital tools produced more accurate analyses than their human counterparts.

[M] In the United States, the days of doctors routinely making house calls are long gone. Soon to follow: Private Skype-like interactions between patient and doctor, taking place online. Patients' vital signs will be obtained and shared with the doctor via a range of wearable devices.

[N] The time it usually takes for medical appointments - including travel and waiting room time - will plummet, replaced by telemedicine visits with a new type of doctor, the "virtualist." In the future, most patients will have medical appointments in the comfort of their own homes.

[O] The conventional prescriptions in your future could be given out by an ATM-like robot, remotely controlled by a provider to ensure the right doses at the right times. Or your doctor could consult your genetics test to determine the most appropriate drugs for your specific gene profile.

[P] If you're not meeting in person with your doctor, could a robot serve as well as a human? Soon they may be answering calls. A chatbot nurse will ask about your symptoms and use data from your wearable devices and the crowdsourced health records of others like you. Should your complaint be psychological more than physical, you can seek counseling from a virtual therapist programmed to converse as a human would, offer self-help guidance, and lend a sympathetic ear.

[Q] It's great to benefit from all this technological progress, but it's just as important to spread it. In 2016, an estimated 3.6 million people in low- and middle-income countries died because they lacked access to healthcare. And even more people in those countries - an estimated five million - died because they got poor-quality care. We can change that, starting today, by sharing the wealth of new medical technologies and other health and wellness resources.

- ____ 11. In paragraph B, who is the Facebook group for?
- people who like Otzi the Iceman
 - people who are distantly related
 - friends of Harriet and the author
 - people who have rare types of DNA
- ____ 12. In paragraph E, what is the meaning of the word *ubiquitous*?
- found all over
 - new and innovative
 - on sale for a good price
 - worn like clothes
- ____ 13. In the second sentence of paragraph K, what does *it* refer to?
- a microphone
 - software
 - a phone
 - AI analytics
- ____ 14. What is the main idea of paragraph M?
- Medical appointments will not be needed in the near future.
 - Wearable devices will share patients' data with doctors.
 - Online medical appointments will soon replace house calls.
 - Many new wearable devices are not yet effective.
- ____ 15. In the second sentence of paragraph P, what does *they* refer to?
- humans
 - doctors
 - robots
 - calls
- ____ 16. In paragraph O, we can infer that robots will give us medicine ____.
- while making house calls
 - at a doctor's clinic
 - at a bank
 - from a machine on the street

- ____ 17. The following sentence would be best placed at the end of which paragraph?

Such devices can also be equipped with tiny cameras that enable a doctor to see inside their patients' bodies.

- Paragraph G
 - Paragraph H
 - Paragraph I
 - Paragraph J
- ____ 18. What kind of figurative language is used in paragraphs A and B?
- personification
 - hyperbole
 - imagery
 - anecdote

____ 19. What kind of figurative language is used in the following sentence from paragraph D?

We've seen an explosion of tech-driven innovations.

- a. personification
- b. hyperbole
- c. alliteration
- d. anecdote

____ 20. What kind of figurative language is used in the following phrase from paragraph L: *the technology "learned" to spot which patterns?*

- a. personification
- b. hyperbole
- c. imagery
- d. anecdote

DIRECTIONS: Complete the sentences using the words in the box.

accountable	dynamics	initially	initiative	innovation
instability	intervention	investment	outlier	productivity

- 21. She was _____ reluctant to use the new computing system, but she prefers it now.
- 22. The company is looking for more _____ so it can grow its business overseas.
- 23. The hospital will release him from intensive care when they think he will be able to survive without the help of medical _____.
- 24. The company is implementing new processes that it hopes will improve the _____ of its employees.
- 25. The large wealth gap has created a lot of resentment and political _____ in the country.
- 26. As the director, he will be held _____ for any mismanagement of company funds.
- 27. When she was promoted to be his boss, the _____ of their relationship changed.
- 28. They started a(n) _____ to help empower young women in the work force to take on more leadership roles.
- 29. Most companies try to encourage _____ and creativity in the workplace.
- 30. We repeated the experiment 100 times and all the results fall within this band, except for this one _____.

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Answer Section

1. ANS: D	PTS: 1	REF: Pages 63-66	OBJ: Gist
TOP: Science and Progress			
2. ANS: C	PTS: 1	REF: Page 69	OBJ: Making Inferences
TOP: Science and Progress			
3. ANS: C	PTS: 1	REF: Pages 63-66	OBJ: Purpose
TOP: Science and Progress			
4. ANS: B	PTS: 1	REF: Pages 63-66	OBJ: Negative Detail
TOP: Science and Progress			
5. ANS: B	PTS: 1	REF: Pages 63-66	OBJ: Supporting Detail
TOP: Science and Progress			
6. ANS: D	PTS: 1	REF: Pages 63-66	OBJ: Paraphrase
TOP: Science and Progress			
7. ANS: C	PTS: 1	REF: Pages 63-66	OBJ: Anaphoric Reference
TOP: Science and Progress			
8. ANS: B	PTS: 1	REF: Pages 63-66	OBJ: Idiom
TOP: Science and Progress			
9. ANS: A	PTS: 1	REF: Page 69	OBJ: Making Inferences
TOP: Science and Progress			
10. ANS: A	PTS: 1	REF: Page 69	OBJ: Making Inferences
TOP: Science and Progress			
11. ANS: B	PTS: 1	REF: Unit 3	OBJ: Supporting Detail
TOP: Science and Progress			
12. ANS: A	PTS: 1	REF: Unit 3	OBJ: Unfamiliar Vocabulary
TOP: Science and Progress			
13. ANS: C	PTS: 1	REF: Unit 3	OBJ: Anaphoric Reference
TOP: Science and Progress			
14. ANS: C	PTS: 1	REF: Unit 3	OBJ: Main Idea
TOP: Science and Progress			
15. ANS: C	PTS: 1	REF: Page 69	OBJ: Making Inferences
TOP: Science and Progress			
16. ANS: D	PTS: 1	REF: Page 69	OBJ: Making Inferences
TOP: Science and Progress			
17. ANS: C	PTS: 1	REF: Unit 3	OBJ: Cohesion
TOP: Science and Progress			
18. ANS: D	PTS: 1	REF: Page 60	OBJ: Identifying Figurative Language
TOP: Science and Progress			
19. ANS: B	PTS: 1	REF: Page 60	OBJ: Identifying Figurative Language
TOP: Science and Progress			
20. ANS: A	PTS: 1	REF: Page 60	OBJ: Identifying Figurative Language
TOP: Science and Progress			
21. ANS: initially			
PTS: 1	REF: Page 70	OBJ: Vocabulary	TOP: Science and Progress

22. ANS: investment
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
23. ANS: intervention
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
24. ANS: productivity
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
25. ANS: instability
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
26. ANS: accountable
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
27. ANS: dynamics
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
28. ANS: initiative
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
29. ANS: innovation
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress
30. ANS: outlier
PTS: 1 REF: Page 70 OBJ: Vocabulary TOP: Science and Progress