

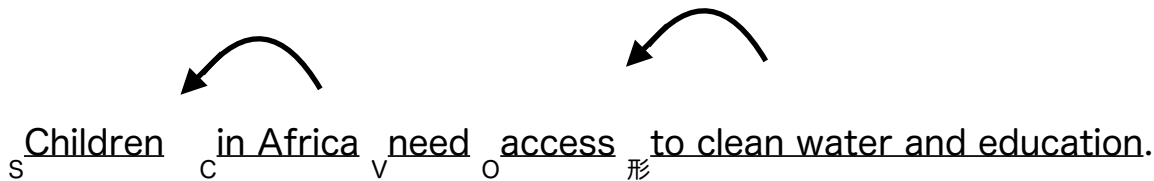
みんなとゼミナール 中3英語

文構造の解析

[ルール]

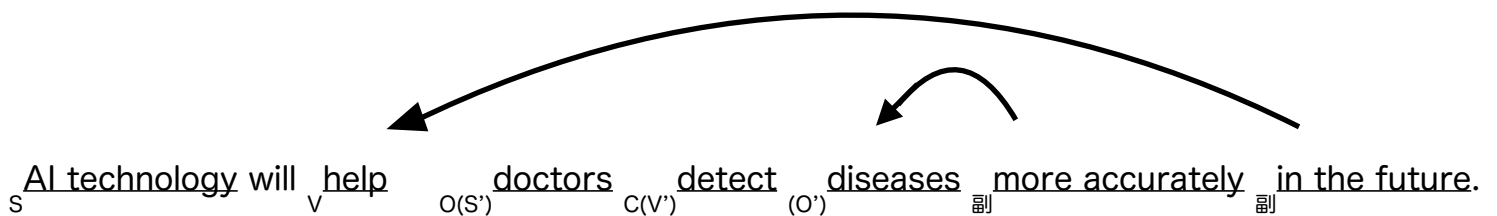
- ①主語にS、動詞にV、目的語にO、補語にCと書く。
- ②名詞節、形容詞節、副詞節はthatや接続詞などを含めて[]でくくる。
- ③副詞や形容詞はどこにかかっているのかわかるように矢印をかく。
- ④助動詞や間投詞は無視して良い。

1.前置詞＋名詞（形容詞句）



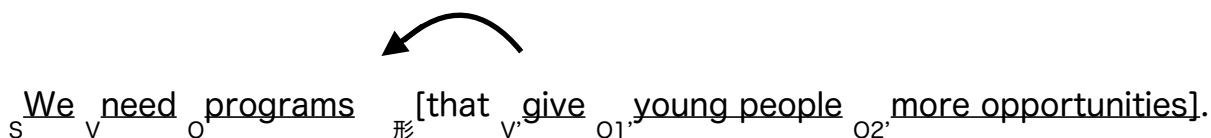
（アフリカの子供達は綺麗な水と教育へのアクセスを必要としている。）→第3文型(SVO)

2.単純副詞&前置詞＋名詞（副詞句）



（AI技術は将来、医者が病気を正確に発見するのを手伝うだろう。）→第5文型(SVOC,OCがS'V')

3.関係代名詞（形容詞節）



（私たちは若者により多くの機会を与えるプログラムが必要です。）

→第3文型（SVO）[関係代名詞の中は第4文型(SVOO)]

4.間接疑問文（名詞節）

Scientists study [how climate change affects human health].
s v o s v o

(科学者は気候変動がどのように人間の健康に影響するのかを研究します。)

→第3文型(SVO) [how内も第3文型(SVO)]

5. There 構文 & 関係副詞 (形容詞節)


There are many countries [where freedom of speech is limited].
v s 形 s v c

(言論の自由が規制されているたくさんの国があります。)

→第1文型 (SV) [関係副詞の中は第2文型 (SVC)]

6. 接続詞の文 (副詞節)


Citizens protested [after the government announced the new law].
s v 副 s v o

(政府が新法を公表した後、市民は抗議しました。)

→第1文型 (SV) [after内は第3文型(SVO)]

7. 疑問詞(目的語) & to不定詞 (副詞句)


What can citizens do to fight corruption?
o s v 副

(汚職と戦うために市民は何ができるか?) →第3文型 (SVO)

8. 疑問詞 (主語)


Who will take responsibility for the political scandal?
s v o 形

(誰がその政治スキャンダルの責任を取るのか?) →第3文型 (SVO)

9. 疑問詞 (副詞)

Why can't _副 some children _S go _V to school? _副



(なぜいくらかの子供達は学校に行けないのか?) → 第1文型 (SV)

10. 動名詞 (名詞句)

_S Teachers _V considered _O learning foreign languages _C useful.

(教師たちは外国語を学ぶことが有益だと考えた。) → 第5文型 (SVOC, O=C)

11. 進行形



_S The UN _V is considering _O [whether _S refugees can _副 safely _V return _副 home].

(国連は難民が安全に家に帰ることができるかどうかを検討しています。)

最終目標

あらゆる文を英語から日本語へ、
日本語から英文へ
相互変換できるようになること

Rina is an only child, but her parents are always busy. Naturally, she grew up by first looking at picture books and later reading her favorite books by herself. After she started to go to school, she visited the city library, the school library and all the nearby bookstores. Nothing was more pleasurable than reading for her. Of course, she knew there were “e-books” available anytime. She also knew they were never sold out. However, she liked paper books better because she could feel a kind of warmth from the pages when she touched them.

Books have a magical power to attract us. They can sometimes completely change the world. They can also change places and times, so they seemed like time machines to Rina. Even when she read many textbooks for her studies, she still felt like reading more. She couldn't imagine a world without books. Rina sometimes wondered whether it was worthwhile just to read books for fun. Isn't it a waste of time? She was right in the middle of puberty then, and she was wondering about who she was. She knew many book lovers started to write novels themselves. She also knew some started to model their lives after the characters in their favorite books. Although reading books gave her great joy, it was after all a passive activity. After she realized this, she couldn't read any books for a while because she felt reading painful. She tried to write a novel, but absolutely no ideas came to her. What can I make out of reading? She continued to ask herself.

When Rina was sitting at her desk without thinking about anything in particular during an afternoon break, Kaori, one of her classmates, suddenly spoke to her.

“Hey, what's the matter with you? You're not reading a book. Are you OK?”

“Well, I think ... I am OK. I'm just ...”

Rina didn't have many friends and she wasn't used to talking about herself. So, she was a little confused by the sudden question.

“You know, do you know I'd always like to talk to you? But you always seem absorbed in reading. Now let me ask. What kind of books do you like the best? I love modern Japanese literature, like Mishima and Dazai.”

Surprisingly, Rina was talking about her problem without realizing it.

Kaori said, “There is nothing to worry about. You enjoy reading books, right? If so, what's wrong with that? If you are so worried, why don't you join us? I belong to a reading circle. Once a month, we choose a certain book and read it at home. Then, we get together and talk about it.”

Rina accepted her offer and promised to come with her to the next meeting.

The first meeting made her nervous, but it was very meaningful. The book of the month was one of her favorite writers. Although the members talked eagerly, they also listened sincerely to the opinions of others. Rina was impressed to learn that one book could be understood in many different ways.

Rina is looking forward to the next meeting. She knew one thing for sure: when you open a book, you open a door to not only another fantasy but also to a wider reality.

Welcome to the world of movies! A leading role actress wanted!

We're a movie production company. We are thinking about making a movie in Asahigun. This movie is about the life of a woman in this city. Please read the following requirements below and apply:

1. Age 13 to 18 years old
2. Gender: female
3. Number of Positions: One
4. Deadline: June 30 (Wed)
5. Required Documents: Your personal history, an essay on movies and your photograph
6. Send to: ABC Productions ○-x Shigetomicho, Minato-ku, Tokyo

Note

1. Acting experience is not required.
2. Documents will not be returned.

We have some good news!

Even if you are not qualified for the leading role, you don't have to feel bad. The Hiruma City Film Commission, a local volunteer organization, is now recruiting extras regardless of age or gender. If you are interested, how about contacting them?

Hiruma City Film Commission, KS Building, 1-x-x Hiruma, Hiruma City. Phone number: 012-456-6789

Dialogue

Mark: Hi, Sayaka. Did you know they'll shoot a movie in this city this August?

Sayaka: Really? The poster says they want a girl to be the leading role.

Mark: That's right. Why don't you apply for it? You belong to the drama club.

Sayaka: Well, but school drama and a professional movie are completely different. Playing a different character is common to both, I think.

Mark: I don't think so. Becoming a different character is common to both, I think.

Sayaka: Maybe. To tell the truth, I'm a bit interested in it. If I see how a movie is produced, it'll be exciting!

Mark: The poster also says they need extras. If you become an extra, you can see the world of movies from the inside, too.

Sayaka: OK. That's right. I'll apply to be an extra, so you should apply for the leading role.

Mark: Good idea. By the way, what's Hiruma City Film Commission?

Sayaka: It's an organization for promoting movie locations in this city. It was established last year.

Mark: I see. For the application, don't forget to send your photo.

Sayaka: I have some photos at home, but I'm afraid they're too casual.

Mark: They may not be so bad, but one of my friends is very good at taking photos. Actually, he is as good as a professional!

Sayaka: That's great! But I don't have enough money to pay a professional.

Mark: No, he is not a professional, and he'll be happy for the opportunity to try his own skills. How about next Sunday? Maybe I'll need my photo to apply to be an extra, too.

Sayaka: I understand. I'll call you later.

Mark: OK. Bye!

Last summer, my family and I went to Prague in the Czech Republic. Everyone in my family loves traveling, and a friend of my father's advised us that we should visit that city because it would be the most beautiful city in the world. For this trip, I had a big responsibility. I had to plan everything for my family. I went to travel agencies for information right after we decided on this destination. I also booked flight tickets for all of us. I read a lot of guidebooks so that I could plan our schedule there little by little.

The whole city of Prague is designated as a World Heritage Site, but it is still a small city, so we could get to every place on foot. First of all, we walked across the famous Charles Bridge. My mother was especially excited when she saw the wonderful flow of the Vltava River below. Then we saw Prague Castle; it was more beautiful for me than any other castle. I felt that I was suddenly brought back in time to the Middle Ages. Prague is further north than Hokkaido, so it was still light even at 9:00 in the evening. We made the most of the long daylight and visited as many sites in the city as possible.

The next day, we all visited the National Marionette Theatre; it took ten minutes from the Charles Bridge to the place on foot. Puppetry is a traditional Czech performing art, and it is now designated as an Intangible Cultural Heritage by UNESCO. Honestly, it was the most interesting place for me on this trip. We watched a night show of "Don Giovanni," one of their most popular performances. All the lines were in Italian, and they didn't provide any subtitles. I couldn't understand Italian, but the story itself was easy to understand. We were satisfied with the show. After the show, while we were walking back to the hotel, the streets were illuminated with lights. That was also a memorable and beautiful sight for me.

On the third day, we joined a marionette tour, and walked around backstage at the theatre. They showed us many of the real marionettes. I was even able to operate one! Can you guess why puppetry is popular in the Czech Republic? The country was long dominated by other regions like Germany or Austria. In particular, under the very harsh German reign, during the 17th to 19th centuries, the use of the Czech language was banned in public places. However, puppetry was allowed to be in the Czech language, since it was an essential part of their tradition, even the German rulers thought that puppetry performances were impossible without the language.

Of course, the Czech people at that time struggled and tried to protect their language through the only possible channel: puppetry. It soon developed into a kind of performing art, not just puppet shows. You probably think that puppet shows are for children, but Czech puppetry is not only for children, but also for adults. It shows the viewers the difficult life under the German reign and expresses the Czech people's desire for freedom. After we learned its somewhat dark history, we became more interested in it. We changed our original plans and visited many marionette theatres. All of them were very original and splendid.

As a souvenir for myself, I bought a marionette in traditional Czech costume. It always reminds me of the wonderful time in the Czech Republic.

Lucille Ball was born on August 6, 1911, in Jamestown, New York. When she was a child, her family was poor. There was also something sad in her early childhood. Her real father died of an illness when she was only three. Her mother was also expecting another baby then. She had to find both a new job and a new husband soon. However, this stepfather didn't like children, so he and her mother left her baby brother and her behind and went to Detroit. In the end, her brother was taken by their real grandmother, and Lucille was raised by her stepfather's poor parents. When she met her mother and stepfather again, she was already eleven.

At the age of 15, Lucille enrolled in a drama school in New York. However, she couldn't adjust to life there. She soon dropped out of the school. In fact, a teacher told her that she had no chance of success. She was very shocked and got depressed. After leaving the school, she did some modeling jobs, but the pay was low for models. She was always poor even though she worked very hard. After a while, she nearly broke down because of fatigue and malnutrition. She remembered later that it was the most difficult time in her life. She took a rest for two years, and in the early 1930s, she felt like acting seriously, so she moved to Hollywood. Surprisingly, she easily got parts and performed them energetically.

In the 1940s, she met a cool Cuban by the name of Desi Arnaz. They worked together in the film *Too Many Girls*. This time they fell in love and got married. Although Arnaz supported her, Lucille couldn't succeed in TV dramas. So, he advised her to try radio dramas. He was right. She got an important role in the radio comedy *My Favorite Husband*. This drama drew attention, and the biggest American broadcasting station, CBS, decided to feature Lucille in a new TV series. However, since she insisted that Arnaz play the role of her husband in the drama, CBS started to worry about featuring her. They thought that a white woman and a Cuban man would not be welcomed in the U.S. then since discrimination was still very strong. Therefore, they established their own company and tried to show that their idea was right by making a success on the stage before actually signing with CBS for the TV series.

On October 15, 1951, the TV series *I Love Lucy* started, and the real couple made their debut as a couple in a program. As soon as the drama started, it became a big success because the viewers found that the drama was something completely different. Lucille played Lucy, and both Lucille and Lucy became superstars. The drama reached the highest viewer ratings of 71.7% and even now is regarded as one of the best comedy shows ever. You can still watch it on some TV channels and buy Lucy goods at Hollywood souvenir shops.

Lucille Ball hit her peak as an actress then, and she went a different way after that. She not only continued acting but also ran a major television production studio as a manager. Her studio made a lot of hits and revolutionized the American show business. Then, one day in 1989, she appeared at an Academy Awards ceremony and was welcomed by a lot of people. About one month after that, she died at the age of 77. She was a true comedienne; she laughed away a lot of difficulties and made her life a great success.

Paper Recycling Contest

What is paper recycling?

Paper recycling is to collect used books, magazines, paper packages, corrugated containers and change them into new paper products. It will save paper resources and reduce tree cuttings, so it can contribute to a sustainable society.

Let's think about how to promote paper recycling!

1. The purpose of the Paper Recycling Contest is to enhance the understanding of paper recycling.
2. We invite you to make posters and essays for promoting paper recycling. You can also present ideas to promote recycling or activities to collect used paper. We also welcome handcrafts made of old paper.

How to apply

1. Elementary school and junior high school students only
2. Six sections: elementary school poster, elementary school essay, elementary school handcraft, junior high school poster, junior high school essay and junior high school handcraft
3. One application per person
4. Deadline: December 10 (Fri.)
5. Send to: Paper Recycling Promotion Center,
○ – × Chuo, Shinjuku-ku, Tokyo
6. Every applicant will get a notebook made of recycled paper!

Examples of Topics

1. Ways to collect used paper in my house
2. How to work together with other people to collect old paper
3. How to continue old paper collection activities
4. Why we recycle paper

Note

1. We will not return your poster, essay or handcraft.
2. We will publish the names and works of the winners.

Dialogue

Mina: Hi, Bob! Look at this poster.

Bob: Paper recycling? I don't know much about it.

Mina: Me, neither, but this poster explains about it. I'm interested in it. I hear that the toilet paper in our school bathrooms is made of used paper.

Bob: Really? I didn't notice it, but the quality is not bad.

Mina: Maybe I will apply for the contest.

Bob: Good! Which section will you choose?

Mina: Well, I'll choose the essay section. I'm not good at painting or making things with my hands.

Bob: And, the junior high school one, right? Because we are junior high school students.

Mina: Yeah, of course. Why don't you apply for it? It's a good chance to learn about paper recycling.

Bob: You're right. Hmmm... I'm going to make something from used paper. I think I can make a playground for cats.

Mina: Good! I'm going to invite Kate to apply for the poster section. She's good at painting.

Bob: That's a good idea! She's like a real artist. We have to learn much more about paper recycling.

Mina: You're right. How about getting together and talking about it?

Bob: OK. I'll check the Internet before that.

Mina: I'll go to the library and collect books about it. How about tomorrow at my house?

Bob: Good. When will you contact Kate?

Mina: I'll do it now. See you tomorrow.

I made my first hair donation just last month. Do you know about the words? It may not be very familiar to most of you. Today I will talk about it.

Hair donation comes from two words, “hair” and “donation.” Of course, you know the word “hair,” but how about “donation”? It may be a difficult word. It means “giving something for free,” so hair donation is an act of giving your hair without getting money. You may wonder, “Who wants hair?” In fact, a lot of people need it for various reasons in the world. Your hair can help them a lot. In other words, hair donation is a popular form of philanthropy around the world.

We are still young, so we cannot be helpful to others. In my case, I have few opportunities even for volunteer activities. But one day about three years ago, I learned that some organizations here in Japan offered medical wigs for free to people. They want to use them for various reasons. For example, some of them lost their hair due to cancer treatment. For such people, these wigs are very precious and meaningful. So, I wanted to help them.

In fact, I always liked my hair short. However, since hair for donation has to be over 31 centimeters long, I had to wait for about three years until my hair grew long enough.

Anyone can donate hair unless it is badly damaged and breaks easily. Your nationality, gender, hair color or hair type don't matter. Even if your hair is curly or gray, or even if you changed its color or permed it, you can donate it.

I thought my hair had to be beautiful. Suddenly, I felt a strong responsibility for my body. In other words, I thought I should lead a healthier life to make my hair more beautiful. So, I tried to eat only healthy food, get enough sleep, and be stress-free. I had a strange feeling that my hair was no longer just mine, though it was of course mine.

By the way, I always go to the same hair dresser, and she is entirely in favor of hair donation. To tell the truth, I learned about it when I went there three years ago. Therefore, she was very happy when I made an appointment and told her that I would donate my hair after I cut it short. Actually, your hair must not be wet when it is cut. Wet hair will go bad very quickly and spoil your goodwill. And you have to tie it in small bundles with rubber bands. I was very nervous when she cut my hair. I also remembered my three-year effort. This way, I am now back to a girl with short hair.

After the haircut, I gathered all the bundles of hair and sent them to the organization with a note. It gave them the necessary information about my hair. At that moment, I felt really relieved. I was very happy that I could help people in trouble.

Now let me make one wish. By giving this speech, I hope that more of you will be interested in donations, in particular hair donation. I also hope that you actually help others with your hair. Most girls can do it easily, and even some boys with long hair can. If it is difficult, you can donate some money to the organization by buying their shampoo. I am already growing my hair long for my next donation. Please find something helpful to others in your own way. My way is hair donation, but yours may be different. Thank you very much for your attention.

Alice goes out to her garden to pick flowers every morning. She puts them in a vase and begins to make the breakfast. She looks at her husband three years ago, and lives alone now. She always puts the vase next to his picture. She is eating breakfast, she looks at the pictures and the flowers alternately. She sometimes talks to her husband about the flowers.

Alice loves flowers. She first met her husband John when she went hiking in the mountains with her friends. John was also with his friends, and the two groups walked and talked together merrily. However, Alice was walking alone and taking pictures of small flowers on the wayside. John noticed her.

“Do you like flowers?” he asked.

“Yes. I love them. There are different kinds of flowers in the mountains,” she answered.

Other people enjoyed the beautiful scenery of the mountains, but Alice and John were talking about flowers. In fact, Alice was talking and John was just listening to her and sometimes asked questions.

After the trip, they began to exchange letters and sometimes met in each other's town. One day just before Christmas, John said to Alice, “I'd like to talk with you about flowers every day.”

She asked him what that meant.

He said, “Well...will you marry me?”

Alice laughed because she was surprised, but he was serious. She thought that he understood her very well, so answered, “Yes, I will.”

Alice and John lived in a small apartment in town. Alice grew plants in pots on the balcony. They worked hard, but talked about flowers at least once a day. When their first child was born, they moved to a house in the suburbs. Alice was very happy that she had a small garden.

One year later, another child was born. Those two children grew up healthy and left the house after they graduated from high school. John retired and had enough time to talk with Alice. They grew flowers in their garden together. They had a quiet but happy life.

However, five years ago, John got sick. He was in and out of the hospital. At that time, Alice brought him flowers from their garden. They talked about how flowers grew in that season and what kinds of plants to grow the next season. Neither of them wanted to take his illness seriously.

Three years ago, John's condition got worse. One day, when Alice visited the hospital, John asked, “Do you still remember what I said when I proposed to you?”

Alice said, “Yes, of course. I'd like to talk with you about flowers every day, right?”

“Yes. We are really keeping our word. We talk about flowers every day. To tell the truth, I was not very interested in flowers in the past,” said John.

“I noticed that, but you tried to understand my passion,” said Alice with a smile.

“Oh, yes, but I gradually became interested in them. Now I know many of their names, and their beauty. Thank you for telling me about the wonderful world of flowers. I can't imagine my life without you and flowers,” said John.

Alice could not find the right words for a moment. She touched his hand, and said “Me, neither.” One week later, John died.

Now Alice lives alone, but her children and friends often visit her. At such times, they sometimes talk about their memories of John with her. She is happy at these times. However, she never tells them what John said about flowers. She thinks that it is their secret. Every night she looks forward to picking flowers in the garden, putting them in the vase and talking about them with her husband the next morning.

What supports our lives? Your friends and family. They are not wrong. But, let's think about this question more broadly. The answer is every kind of creature. We should learn more about life. We are alive because of the various other forms of life in the natural world, from the microbes in the soil to insects, coral reefs and animals. All creatures have evolved to live in many different environments since the birth of the Earth. About 30 million species currently exist with rich variation. And, they live by directly and indirectly supporting each other. This variation of creatures and the connection of all life are biodiversity. Sadly, however, we are endangering this diversity although we receive benefits from other creatures.

Biodiversity includes ecosystems, species and genes. Among them, let's think of an everyday example of the destruction of an ecosystem. A lot of people come to the pond near my house to fish, but they mostly catch black bass and other non-native species. These fish eat the plankton and small fish in the pond. Similarly, there are a lot of red-eared turtles and they are also non-native. This is probably because their owners could not take care of them and put them into the pond. Then, they reproduced and their population increased. In this way, plant and animal species are directly affected by changes to their ecosystem.

At the same time, we must also consider the impact on genes. Genes decide the rich variation in ecology and appearance, and such changes to the ecosystems also influence the genes. On the other hand, when we humans do not do anything to improve our environment, problems can happen. For example, damage is done to crops by wild boars, deer, and monkeys. Some people believe that this is because of the deterioration of satoyama, or cultivated mountain village areas. There must be many other examples like them. The increase in food imports and global warming also harm biodiversity. The decrease and extinction of native species are also major problems throughout the world.

Our air, water and food are gifts from nature. Forests, rivers and coral reefs can sometimes protect us from disaster. Plants and animals are also necessary for making medicine. Also, natural design often gives us wisdom for technological innovation. In short, biodiversity is the basis of our lives and is the essential cycle of life. Let's try to preserve the local ecosystem around you now. The ecosystem protects the species and by doing so, gene diversity is also protected. As a result, this leads to the preservation of the ecosystem.

Desertification means not only the change from fertile land to desert, but also the loss of fertility from land. This problem was first noticed in the 1970s because from 1968 to 1973 there was a large drought in the Sahel, the southern part of the Sahara Desert in Africa, and one million people died. In order to deal with this problem, United Nations Conference on Desertification (UNCOD) was held in 1977, and the Plan of Action to Combat Desertification was adopted. International efforts to stop desertification started.

There are mainly two causes of desertification. One is climate change, and the other is the overuse of land by humans. Climate change occurs naturally and also because of human activity through global warming. About 41% of the land on earth is dry, and one-third of the world's population lives there. People cut down trees and make fields to grow crops and raise livestock. These activities reduce a large amount of soil fertility and the productivity of the land decreases as time passes. People try to get more from the land because they need food, and make the land more barren. It is a vicious cycle. When their land is extremely dry, people leave it and move to another land in order to survive. This often causes problems with other people, and sometimes leads to civil wars.

Since desertification had not improved, the United Nations Convention to Combat Desertification (UNCCD) was proposed at the Earth Summit in Rio in 1992. 196 states and areas plus European Union (EU) took part in the convention, and they had review meetings every two years. Furthermore, the United Nations Decade for Deserts and the Fight Against Desertification (UNDDD) was established in 2007. It designated 2010 to 2020 the decade for dealing with desertification. Major measures for desertification are protection of water resources, forest preservation, tree plantings and education of farmers.

The Japanese government is also trying to solve this problem. Its measures have three major pillars: contributions to international organizations, aid between the two countries, and aid through grass-roots activities such as NGOs. A Japanese company started to help with a forestation project in China in 2001 and continued it for six years. This project not only improved local people's lives but also prevented yellow sand from happening.

Since one of the main causes of desertification is climate change, our activities can affect it. If we try to reduce the causes of global warming, we will be able to help prevent desertification. Desertification is not somebody else's problem. We can still change the Earth into a better planet by helping each other and changing our way of life.

The other day, my friend Lisa, a Canadian student now in Japan, asked me “why there were so many vending machines in Japan.” I was surprised to hear that because I had never thought about the number of vending machines. It is convenient if there are vending machines near my house. If not, I have to go to the nearest convenience store or supermarket. That may take time and energy. But why are there so many vending machines in Japan? And what kind of role do they have? I started to do research on them.

One possible reason is that there are not many instances of vandalism on the machines in Japan. In some countries, thieves can steal money from vending machines by crashing their cars into them or by other destructive methods. In Japan, such things do not occur so often, so there are a lot of vending machines outdoors.

Another possible reason is that a lot of people live in Japan and their need for vending machines is very high. What’s more, beverage companies are trying to set as many vending machines as they can for free in each town in order to meet their demands.

However, the number of vending machines is decreasing slightly these days in Japan. This is partly because a lot of people are afraid that they consume too much electricity and can cause light pollution. Therefore, beverage companies are thinking about making vending machines more helpful to them.

One idea is to attach a camera to the machine in order to prevent crimes. If someone is trying to do something wrong, the camera can record it. In addition, people will feel relieved to see the bright light of the machines when they are walking alone at night.

Another idea is to offer drinks and other items for free when disasters occur. For example, if a large earthquake happens, a remote operator instructs the machines to give drinks for free. That will be a great help for people in need. In addition, people can also charge their smartphones or get information at some vending machines at such times. However, you can use these services only while electricity is on.

On some vending machines you can find the address of that location. It will help you when you get lost, or call the police or a fire station. Some vending machines even talk to you after you buy a drink.

Though there are some problems about vending machines such as waste or allowing minors to buy alcoholic drinks or cigarettes, manufacturers are coming up with various solutions. Since we have a lot of vending machines and they have become necessary for us, we should also try to make use of them smartly.

Ms. Yamada: Today, we'll talk about automated driving. Do you know anything about it?

Ken: I think it means that cars run by themselves without human operation.

Yuka: In my understanding, it means AI helps us drive.

John: I heard that there were some levels in automated driving.

Ms. Yamada: Yes. All of you are right. Automated driving has six levels from "no automation" to "full automation," and each government decides which level is permitted.

Yuka: And, it is also important to judge which level is technically possible for safe driving.

Ms. Yamada: Of course, but technology is advancing day by day. What do you think are the advantages of automated driving?

John: We can reduce human errors while we are driving.

Ken: Yes, and we can do other things such as searching on our smartphones if it is permitted.

Yuka: I think traffic jams will be reduced by automated driving because the cars will take the best route.

Ms. Yamada: You're right. Then, what are the disadvantages?

Ken: Well, the driving skills of drivers may not improve because they will rely on the system too much.

Yuka: But, we won't need driving skills anymore, right?

Ken: Maybe ... but we'll need them in an emergency.

Ms. Yamada: Do you think there will be any other problems?

John: Hacking is a big problem, I think. Someone may hack the system to cause trouble.

Ken: That's terrible. In the worst case, terrorists may use cars for bombings.

Yuka: I hope there will be some measures for preventing such bad use.

Ms. Yamada: There should be . There is also a moral problem. If we have to choose to move the car so that it will kill one person or move in a different way and kill two people, should the machine be programmed to choose the first choice?

Ken: I think so ... well ... no, it is very difficult to answer that question. If the first "one person" is someone in my family, I can't say it's a good choice.

Yuka: You mean that AI decides the fate of humans, right?

John: But AI's decision is a human decision. We have to decide which choice to take.

Ms. Yamada: And also, we have to think about the responsibility of a traffic accident. Who will take responsibility for the accident, the driver, the computer programming company, or the car manufacturer?

Yuka: That depends on the case. If the programming is the main cause of the accident, the computer programming company should take responsibility.

John: That's right. I think it'll be judged by the laws.

Ms. Yamada: It's a difficult problem, too. What do you expect from the cars of the future?

Ken: I hope old people or people with physical disabilities can move freely with automated cars.

Yuka: I hope so, too. And they'll be useful in areas with low populations.

John: If the automated cars choose the best route, it'll be good for the environment.

Ms. Yamada: We had a good discussion about automated driving today.

When I was watching a TV program on health the other day, I heard the words “NK cells.” They say that they play an important role in keeping our bodies healthy. I did not know that there were such cells. I became interested in them and wanted to know more about them.

NK cells are an abbreviation for Natural Killer cells, and they were found in the early 1970s. They attack virus-infected cells and prevent tumor formation, but they do not attack normal cells. They are part of the immune system, so they protect us from getting cancer and viral diseases.

Since I learned that NK cells had a very good effect on our health, I wanted to make mine more active. If I can do that, my immune system will become stronger. I looked for ways to activate NK cells, and I think I found some.

First of all, a good sleep is very important for NK cells. Parasympathetic nerves are activated during a good sleep, and they promote the activity of NK cells.

Second, laughing is very good for NK cells. I was surprised to know that. Laughter from the bottom of your heart or even fake laughter can make them more active. So, maybe we should see as many comedy movies as possible. Actually, laughter is used for the treatment of some diseases.

Third, NK cells are related to a good intestinal environment. Since many of them live in the intestines, the condition of that organ affects NK cells. Therefore, you should eat foods with lactobacillus like yogurt, pickles and other fermented food, soybeans, and vegetables. They are good for the intestinal environment. I decided to eat natto every morning, and eat yogurt during my tea break. These foods will make me healthier.

Moderate exercise is also good for NK cells. Remember that excessive exercise can damage the immune system. You can start with walking, jogging, or stretching. Your NK cells will become more active if you do these exercises.

While I was doing research on NK cells, I found that traditional Japanese food was helpful for activating them. Though we young people generally like to eat meat, bread, pizza, spaghetti, and other foreign food, and they are not necessarily bad for us, I think that we should think about the advantages of traditional food again, and also think about healthy habits such as sleeping well, laughter, healthy food, and moderate exercise.

Emma: Mr. Yamada, I'd like to hear about your experiences during the war today.

Mr. Yamada: I understand, Emma.

Emma: Thanks. You'll be 85 years old soon, right? Congratulations!

Mr. Yamada: Thank you very much. Luckily, I'm pretty good.

Emma: That's great. Where did you live during the war?

Mr. Yamada: I lived in Chiba with my family. I was a junior high school student when the war ended.

Emma: How many people were there in your family?

Mr. Yamada: There were seven: my grandmother, my parents, my two elder brothers, one elder sister and me. However, two of my brothers were absent because they had gone to war.

Emma: How was your school life?

Mr. Yamada: Studying in the classroom was gradually replaced by military training. We boys were expected to be soldiers in the future. The training became harder and harder, so I believed that I would fight our enemies in the near future.

Emma: What did you do after school?

Mr. Yamada: We were a farming family, so my sister and I often helped my parents in the fields. Of course, I played with my friends near my house, too.

Emma: So you didn't see the real war, right?

Mr. Yamada: At first, information on the war was mainly from radio and newspapers, but in the last six months or so, the enemy planes came near our village. One day, when I was walking from school to my house, I heard an air-raid alert. A few minutes later, a lot of enemy planes came over and started to attack a faraway town with bombs. There was a port there. I just watched the scene for a while. I couldn't think of anything. I didn't think I myself was in danger, so I started to walk again on the path in the fields. Suddenly, I heard the sound of an approaching plane. I started running and jumped into a bush. Some bullets hit the soil just by me. I think I saw the face of the pilot, but I'm not sure now. The plane flew away after that.

Emma: Wow, did such events often happen at that time?

Mr. Yamada: I think so. My sister was a student at a girls' high school and was working at a military factory during the war. The factory was attacked by enemy warplanes and one of her friends was killed during the attack.

Emma: Your sister was very sad, I guess.

Mr. Yamada: Yes. She was crying. Our village was relatively peaceful, but we were always in danger because of the war.

Emma: Did you have enough food? Some elderly people say they were hungry during and after the war.

Mr. Yamada: We had rice, wheat, beans, and vegetables, but not meat or sugar. We were lucky as we lived in the country, but the situation was not like today.

Emma: What happened after the war?

Mr. Yamada: My eldest brother didn't come back. They said he died in the southern seas. My second brother came back from China, but he never talked about the war. I couldn't ask him. He took over my father's fields and died five years ago.

Emma: Thank you for telling me about your experiences, Mr. Yamada. I think we young people have to be more thankful for the peace today.

Esports Competition in Sakura City

First time ever in our city! Come and join us!

- Date: September 20 (Sun.)
- Time: 10:00 - 17:00
- Place: Sakura Hall (23-8 Higashisakura-machi)
- The Large Hall (capacity of 650)
Competition: Participants are going to play Fight of Heroes. (10:30 - 13:00)
- For ages 8 - 18: tournament with 20 registered applicants
(The winner will be given a trophy and an electronic dictionary.)
- For people aged 19 or over: tournament with 25 registered applicants
(The winner will be given a trophy and a travel voucher worth 50,000 yen.)
- Both professionals and amateurs are welcome.
- Advance registration is required.

Guest Player: Aklto (belonging to Team E)

- Profile: Professional esports player
- Playing worldwide
- Won first prize at the last international competition in London
- He will talk about the fascination of esports and its future. (14:00 - 14:45)
- You can ask him questions!

Note: At the Small Hall, a demonstration will be held. If you are interested in esports but haven't tried them yet, don't you play with us? Only for people aged 7 or over.

Kenta: Hey, Anna. I hear that an esports competition will be held at Sakura Hall soon.

Anna: Yes. In two weeks. I'm really looking forward to it.

Kenta: Are you thinking of watching it? If so, I'd like to join you. This is quite a rare opportunity.

Anna: Actually, no. I'm going to take part in it as a player.

Kenta: Oh, really? Unbelievable! By the way, what are esports? I don't know them very well.

Anna: Well, first of all, the "e" in esports stands for "electronic." And, we regard video games and computer games as a new kind of sport if two players or teams compete with each other.

Kenta: I see. When did they start?

Anna: In the late 90s. Thanks to the Internet, playing video games became more like playing sports online. And, I hear that since around 2000, the word "esports" has been used.

Kenta: You know quite a lot. How about the number of players?

Anna: About 130 million around the world now.

Kenta: 130 million! That is far more than I expected.

Anna: I believe the number of baseball players is about 35 million, so that shows that esports are very popular now.

Kenta: But I don't think they are very popular here in Japan. Can you guess the reason?

Anna: I think it is because there still aren't many professional gamers here. I'm not sure of the exact number, but a certain organization in Japan counts only about 200 as professionals.

Kenta: Professionals? Does that mean they make money from playing games?

Anna: Of course! Some professionals abroad make a huge fortune, just like professional baseball players. That is because the environments are well-established for esports there.

Kenta: I see. Oh, this leaflet says they're going to invite a Japanese professional by the name of "Aklto" as a guest.

Anna: I know. He's only 20 years old, but we can say that he's a living legend in the field of esports in Japan. I hope to see him at the competition.

Today I would like to talk about communication between people from different cultures. You may go abroad in the future, and a lot of people from other countries live in or visit Japan now. We should try to understand them well and build a good relationship with them.

Last summer I went to Los Angeles, and stayed at the house of my parents' friend. She lives with her family: her husband and their daughter. The daughter was five years old and was very lovely. When we first met, she looked shy but was smiling. I put my hand forward with the palm down and moved my fingers back and forth because I wanted her to come to me. However, she suddenly stopped smiling and didn't move. I didn't know why. The girl's mother said to her, "She wants you to come to her," and she finally did so. The mother said to me, "Your gesture means 'go away' in our culture." I was surprised to hear that. I asked her, "If you want someone to come to you, what do you do, then?" She answered, "Put your hand forward with the palm up and move your fingers back and forth." The direction of the palm was wrong. I understood that there was a difference between Japanese and American cultures.

I became interested in the differences between the meanings of gestures in different cultures and read a book on them. I found an interesting example. The V sign, or a hand sign making a "V" with the index and middle fingers, spread among American soldiers during World War II as a victory sign. It then became a peace sign in the 1960s and people around the world began to use it.

On the other hand, in the U.K. and some other countries, people think that the V sign with the palm inside is an insult. We must be careful about using it. If you want to make a victory sign or a peace sign in these countries, you should turn your palm outside.

Like the V sign, some other gestures have different meanings for different people. We must be careful about this when we go abroad or communicate with people from other countries. We cannot know all of the meanings of gestures, but we can guess there may be other meanings for gestures in other cultures. At least, we should try to know about other meanings of the gestures we usually use. There are a lot of customs around the world, and it is important for us to respect them and try to understand them.

Corrugated fiberboard is convenient, right? My family recently moved to this town, and I saw a lot of cardboard boxes then. They are making progress and are not just “boxes.”

When and where was corrugated fiberboard invented, and by whom? Actually, it was invented in the U.K. to make the inside of silk hats comfortable in the 19th century. After that, it began to be used to protect goods that were easy to break, such as glass lanterns, and was produced in large quantities in the U.S. It was brought to Japan around 1900 and named “danbōru” in Japanese by Inoue Teijiro.

Corrugated fiberboard is made of wavy craft paper attached to paper liner on one or both sides. It is mainly used to make boxes to hold goods in. It is very tough and protects the goods inside. However, it is also used for other purposes.

First of all, it can be used in times of disaster. It is sometimes cold in shelters, so beds made of corrugated fiberboard are helpful. They protect people from the cold, and the walls made of corrugated fiberboard protect people’s privacy.

Another item which can be used in shelters is a toilet made of corrugated fiberboard, a garbage bag and plastic bottles. In shelters, a lot of toilets are necessary, so it is very helpful.

Corrugated fiberboard can be used to make chairs or water tanks if there are packing tape and plastic bags. If we keep these materials in shelters in advance, we can make use of them in an emergency.

Corrugated fiberboard can also be used as interior material like shelves, wall decorations. It is light, colorful, and easy to make and remove. In a Japanese-style room, you can use it instead of traditional paper and wood doors. What’s more, it can be recycled. It is safer than wood or other materials if an earthquake occurs.

We can make toys or a playroom from used corrugated fiberboard for children. We can also make houses or playgrounds for our pets. Animals, especially cats, love corrugated fiberboard for some reason, right? Even if children scribble on it or pets bite it, it doesn’t matter.

I think there are many other ways to use corrugated fiberboard. It will be a good idea to find some examples on the Internet. Why don’t you make something special by yourself? I will build a playground for my cat by making use of the cardboard boxes my family used for moving.

Corrugated fiberboard has a lot of possibilities.

In the late 19th century, a Russian scientist by the name of Konstantin Tsiolkovsky thought seriously about one possibility for the first time in human history: Can we travel into space by rocket? Since space travel was thought to be just a fantasy, nobody thought it could be realized. Surprisingly, he had a great impact on rocket engineering by introducing an important equation in 1897, and he was given the title “Father of Space Travel.”

At around the time of the publication of the Tsiolkovsky rocket equation, Robert Goddard was very interested in science. He was born in Worcester, Massachusetts on October 5, 1882, and was the only surviving child of his family. Though he often got sick, his parents told him to do scientific research in various fields, and he read a lot of books on science. When he was 16, he found a science fiction novel “The War of the Worlds.” At that moment, the course of his life was firmly set; he was fascinated by space flight. While he was small, he often used his local library, but as his health slowly improved, he started to receive a formal education. After he graduated from high school, he enrolled in Worcester Polytechnic Institute and got a B.S. Degree in physics there in 1908. He then went on to Clark University and earned a Ph.D. in 1911. The next year he became a doctor of physics and sometimes taught and performed various experiments there.

In 1912, he temporarily resigned to Princeton University, but he had to move back home to Worcester because he suffered from tuberculosis. While he was recovering, he got two patents for rocket engineering: one for rockets using solid fuel and one for rockets using liquid fuel. After his health improved sufficiently, he was given a part-time position at Clark University, and he carried out further research in rocket engineering there.

Three years later, in 1915, he tried launching a rocket using solid fuel (gunpowder) outside a university building. It was a failure, but he realized that it lacked power. In 1917, he received funds from the Smithsonian Institution so that he could develop a rocket to take weather recording devices into the upper atmosphere. Around that time, he began to realize that it would be important to use liquid fuel for rockets, not solid fuel. Tsiolkovsky’s ideas also influenced him very much. Tsiolkovsky’s equation showed that liquid fuel was better than solid fuel for launching rockets, and Goddard decided to adopt this idea. He soon built a liquid-fueled rocket.

On March 16, 1926, Goddard succeeded in launching it. It flew for 2.5 seconds, and reached a height of 12 meters, and its average speed was about 100 kilometers per hour. After his first success, he continued improving his rockets and became the “Father of Modern Rockets.” Later, we can say that Tsiolkovsky played an essential role in Goddard’s life.

Here in Japan, we have experienced natural disasters, such as earthquakes, tsunamis, floods and typhoons many times. Moreover, in big cities like Tokyo, we are now faced with the possibilities of urban disasters and terrorist attacks. At some disaster sites, because of destroyed buildings and the risk of secondary disasters, even rescue teams sometimes cannot get into the exact spots. Or, in case of a terrorist attack with chemicals, nobody can approach the site until we find out what chemicals are used. Rescue robots have been developed to solve these problems. They are designed to gather information about the damage first and then take the appropriate steps to help the survivors. In other words, they do “extremely dangerous jobs that are impossible for humans to do.”

These developments were made after a large earthquake in 1995. Japan was leading the world in robotics at that time, but we were not completely ready to use robots practically in times of crisis. We had to think more seriously about developing robots we could use at disaster sites. Thanks to many experiences of human rescue teams who have actually done the job, the development of practical rescue robots has advanced quite rapidly.

At a real disaster site, many different things are required for robots. One is that robots must be able to move around quickly while they also avoid the people escaping from the site. Another one is that they must always be connected to other robots like a rescue team so that they can work together, this is because each robot has its own strong point and one robot can do only a few things. In addition, they have to be able to stay connected to each other even when there are no networks available. For example, in case of a big earthquake, that will have to work in a closed space, like the basement under a broken building. Although it can be difficult to connect to the Internet in such a place even under normal condition, if many different types of robots cooperate with each other, they can work without problems. For example, we need robots that can move around by themselves to search a site for survivors as well as robots that can dive into muddy water. We also need snake-like robots that can get into debris and bird-like robots that can find survivors from the sky. Most importantly, we need communication cables that enable other robots to stay connected. At a real disaster site, each of these robots works by itself while they help each other.

Rescue robots have already become essential at disaster sites, but they can and should be put to other uses, even in everyday life. For example, heavy machines like forklifts and cranes are often used at construction sites. Since they are used so much in our daily lives, they can be brought quickly to work at disaster sites. Rescue robots will have to be used that way as well, not just in case of emergency. Also, it is important to build well-organized systems to deliver them as quickly as possible to the place they are needed. We must always be quick because nobody knows when or where the next disaster will happen.

I like rainbows very much. In the last summer vacation, I stayed with a family on Oahu Island in Hawaii and studied English. As a matter of fact, I couldn't improve my English as much as I had expected, but I learned something more important than that.

About 100 years ago, a brother of my great-grandfather emigrated from Hiroshima to Hawaii, and many of his descendants still live there. Therefore, there were many families that were willing to be my host family. I chose a family with the same family name as mine living on Oahu Island.

People sometimes call Hawaii the Rainbow State because you can see many beautiful rainbows there. Hawaii is in a tropical area and it rains quite a lot, so it offers the best conditions for rainbows. Although the main purpose of my homestay was to study English, I cannot deny the fact that in my heart, I was more interested in seeing beautiful rainbows than in learning English.

It was my first trip to another country. I had a lot to tell my host family about because I had learned beforehand about my ancestors from my grandfather in Japan. He also gave me many photos and asked me to show them in my conversations with them.

However, the biggest problem was that I couldn't express my feelings very well in English. What's worse, I couldn't catch what they were saying. I wanted to tell them something, but it was extremely difficult for me to do it in correct English. They always spoke to me slowly, but it was still hard for me to follow. Those facts made me more and more depressed.

One day, my host father found out I was having difficulty, and he said, "Shall we go somewhere by car for a change?" He asked me where I would like to go, and I answered that I wanted to see rainbows. The next day, we all went to a place in which we can see a lot of rainbows. While we were walking around, it started to rain. We quickly went back to the car, and my host father said, "We're lucky to get caught in a shower because a rainbow will appear after the rain." I was excited and full of expectation while I was waiting for the moment.

Pretty soon, a rainbow appeared against the blue sky. It was a truly beautiful arch, and I was even able to clearly see both ends and how the colors were changing gradually.

I was very amazed at its beauty, and my host mother said, "You know, Akane, when your great-grandfather's brother came here with his family, none of them could speak English and they really had a hard time. Now, here in Hawaii, various peoples live together and always cooperate with each other, so multicolored rainbows are a symbol of our integration. We also have the saying 'No rain, no rainbow.' Have you heard it? Even if you haven't, I'm sure you can understand its meaning. So never give up."

I thought about her words and began to understand what the saying meant. I tried to speak English more actively instead of worrying about making mistakes. As a result, I could build a better relationship with my host family. It was a short homestay, but it was a precious experience for me.

Though there will be many difficulties along the way, I would like to continue to study English and learn more important lessons in life through it. At such times, I must remember the saying "No rain, no rainbow."

Eels are a mysterious species of fish whose ecology has long been unclear to us. So far, nineteen kinds have been identified around the world. Only a few of those which live in the temperate zones are edible, and many of these are in danger of extinction mainly because of overfishing. Actually, the one kind, *Anguilla japonica*, which we eat in Japan has been designated as endangered.

Eels are quite different from other fish in many respects. The greatest difference is that some of them grow up in fresh water and swim all the way down to the seas to lay eggs. This means that they are believed to be born and grow to a certain size in the seas, then swim up rivers and spend several years in fresh water, and then again swim down to the seas to lay eggs. Can we believe this? More and more evidence is showing that not all of them change their habitats from fresh water to brackish water to salt water depending on their life stages. For example, research has shown that many *Anguilla japonica* never go up rivers but spend all their lives in the seas. This fact was first confirmed by examining their otoliths. An otolith is a crystal of calcium carbonate deep inside the ears of fish. It tells how old a fish is and where the fish has spent its life stages. According to the results of research done in Japan on eel otoliths, 40% of them spend their whole lives in the seas, 44% in brackish water, and only 16% swim up rivers.

Now another remarkable feature of eels is that they are very slippery. This is because their bodies are covered with mucus. Of course, many other fish also secrete mucus, but the amount eels produce is several times greater. The mucus coats the body of an eel and protects it from bacteria in the water. It also helps eels hide under sharp rocks without getting hurt. In addition, most fish breathe through their gills, so they die soon after they are taken out of water. However, eels can survive much longer out of water because they can breathe not only through their gills but also through their skin. It is believed that they can breathe in up to 50% of the oxygen they need to survive through their skin, and that their mucus again help this process. It helps keep their skin moist and absorb the oxygen in the air, so their bodies are kept wet enough to breathe.

Eels are known to have poor eyesight even for fish. But their keener sense of smell makes up for it. Eels are nocturnal, or active at night. It is of course very dark in the water at night, so it is after all meaningless even if they have good eyesight. Smelling is far more important than seeing for nocturnals like eels. It is also said that eels can come back to their places of birth because of their great sense of smell. One more interesting fact is that eels have no fixed gender when they hatch. It seems that their gender is determined when they have grown to be about 20 centimeters long. Water temperature and stress are believed to be important factors.

As more research is done on eels, new facts will show up. These new facts will certainly enable the partial farming of eels. However, since there are a lot of mysteries that have not been cleared up, it will take a lot of time to realize complete farming. Let us hope that science will help us preserve our custom of eating eels and increase the number of wild ones.

Yuri loves animals. She wants to be a vet in the future. She especially likes cats, so she often looks into pet shops, reads novels whose main characters are cats, watches documentaries on cats, and looks up various breeds of cats in illustrated books. In short, she knows a lot about cats.

However, she has never actually had a cat. This is because she has a little brother and he is allergic to animals. When he is near animals, he soon starts to sneeze and feel itchy. He still likes animals, so he wants to get over his allergy. In fact, he has tried to hug a cat several times, but he couldn't. Every time he tried, he got really sick. He is now forbidden by his doctor to touch animals. They both feel sorry about it.

One hot summer evening on her way home from school, Yuri saw an elderly woman. The woman looked very pale, and she was sweating a lot and walking dizzily. She ended up leaning against the wall of a building. There was no one who could help her, so Yuri talked to her.

"Are you all right, Madam?"

"Thank you, young lady. I think ... I am OK. I'm just very hot ... and feeling a little sick."

Yuri remembered learning what she should do first in case of heatstroke during her last health and physical education class, so she helped the old woman move to some shade and sit down. Then, she advised her to drink some cold tea from her water bottle.

"You know, I have some ice packs in my bag, too. Why don't you keep yourself cool with them?"

"No, thank you very much. I'm feeling much better now. My house is just around the corner. I'll lie down for a while at home."

Yuri went to the woman's house with her, and after seeing her get in, she herself went home.

A few days later, Yuri saw the woman in her garden when she happened to pass in front of her house.

"Good afternoon, Madam. How are you today?"

"Oh, thank you very much for helping me the other day. I just lay down after you left, and I got better soon. You took care of me very kindly, but I didn't think of asking your name at the time, so I couldn't go to your house and thank you properly. I am very sorry."

Yuri was then invited in and served tea and some sweets. Yuri talked a little about herself — that she loved cats but couldn't keep one at home.

"In that case, would you be interested in caring for sheltered street cats? My daughter runs a Hogo-neko cafe down the street and she takes in many cats. How about visiting her? Actually, she always needs help, so she will be happy if you work as a volunteer."

After Yuri came back home, she talked about this with her parents.

"Your kindness has brought this beautiful chance," said her father.

"You should be thankful for the offer and just take it," added her mother.

A few days later, Yuri started to help the Hogo-neko cafe for three hours on Saturday evenings. The cats there were all cute, and all the staff were very kind to her. Now, she is very happy because she is surrounded by cats. After work, she cleans herself very carefully. She washes her hands and removes every cat hair from her clothes in order not to bother her little brother. Yuri has come to like cats even more. The way to be a vet must be a long way to go, but she will never give up.

There is an English saying which goes like this: the grass is always greener on the other side of the fence. Can you guess what it means? Yes, it means what other people have looks better than what you have. As the saying suggests, we cannot help comparing ourselves with people around us. Even if you are quite fortunate, it is natural that you envy people who are more fortunate. This seems especially true of young people today. Now, I'd like to talk about this attitude itself and its merit and demerit.

First, I'll talk about its merit. Sometimes, we wish to be the person we admire, and at other times, we sincerely hope to beat our rivals. I think we need these strong emotions in order to lead healthy lives. This is because by first comparing ourselves with someone, we'll recognize some kind of difference. I believe we can set a higher goal and keep trying to narrow the gap at such times. In my view, this is our strongest motivation in life. Especially young people like us need it because we are on our way to maturity. By first modeling ourselves after people around us, we'll realize our weak points one by one. Each realization will make us develop more both physically and mentally. And, getting closer to our ideal will make us more confident in ourselves. I don't think we can make any progress unless we have some firm ideal and are ready to compete with others.

Next, I'd like to talk about the demerit. I feel young people today make too many comparisons. Maybe I should rather say we are too concerned about others' affairs. Why? The main reason may be due to our overuse of social media. These days, we can very easily look into the private lives of others through social media. In the past, we had to just imagine things because we didn't have any ways to do them. We could also imagine that things were worse than they really were in order to comfort ourselves. Now, however, many celebrities and so-called influencers willingly introduce their private lives online. It has become part of their jobs. They each have too many followers, or people who are interested in them. If the followers know the influencers have bought new clothes and bags, they'll go and get the same items because they admire them very much. However, they cannot get all the items they see online. For example, can you buy a car for 300 million yen? Some influencers buy such extravagant things, but the followers have no way to follow. Then, they realize an important thing: they cannot always narrow all the gaps between themselves and their influencers. But, in fact, those celebrities and influencers themselves fall into the same trap. They continue to show off because they want people around the world to think they are cool and envy them.

After all, living our lives always involves some kind of comparison. Who do you compete with? I'd like to say with ourselves, although it must be very difficult to beat ourselves. We should go our own way more instead of caring too much about other people.

Do you know anything about SDGs? SDGs stands for Sustainable Development Goals; they are the goals which were adopted at the UN summit held in September of 2015. 193 countries belonging to the UN then agreed to achieve these goals in the 15 years from 2016 to 2030. Actually, there are 17 goals included in the SDGs, and the second one is about dealing with global food and starvation problems.

Today, I would like you to think about these two problems. According to a UN report, one in nine people, or about 800 million people worldwide, are suffering from hunger. The number has been increasing and the situation has been getting worse over the past three years. While over 2.6 billion tons of grain is produced every year around the world and people in developed countries are forced to throw away large amounts of food that hasn't been consumed, some people cannot eat enough.

If we look at the number of starving people more closely, we will find an imbalance; 75% of them are in poor rural areas in developing countries. To be more exact, about a half billion live in Asia, about a quarter billion in Africa, and about 50 million in Latin America and the Caribbean Sea areas. I don't think the reason for this imbalance needs any more explanation.

There are three main causes of widespread starvation around the world. The first is natural disasters. They damage farmlands and their yields. Also, people in the damaged areas lose their houses and jobs, and they are unable to get enough food both physically and financially. It is said that more than 80% of those who are faced with food shortages live in the areas in which natural disasters are more likely to happen.

The second is military conflicts. When a military conflict occurs, the civilians living nearby will lose their farmlands and houses and will have to escape from the area. Even those who are lucky enough to stay there will have to stop farming due to physical dangers and will end up with less food than they need. A report released in 2017 stated this: the number of starving people around the world was declining for more than ten years, but it started increasing again mainly due to conflicts.

The last cause is long-standing poverty. This is usually caused by structural defects in a society. Children born into a poor family will not grow up to be rich enough to buy their own land. So, they will not be able to support themselves or their family, and therefore will not be able to send their children to school so that they can get out of this negative circle.

So, what can we do to solve the global food and starvation problems? In order to secure a stable food supply and improve nutritional conditions, we will have to help the poor get enough food, clean water and reasonable education. We will also have to help them start sustainable agriculture by first training them and building more favorable communities.

More importantly, everyone living in developed countries will have to aid developing countries more financially and think about their wasteful lifestyles again. Do you know how much food is wasted in Japan in a year? It's about 28 million tons, and about 6.5 million tons of it is so-called "food waste." This is the food thrown away by shops and restaurants while it can still be eaten. We are just wasting precious food that might have been helpful to those starving people in the developing countries. Now is really the time for us to remember our traditional attitude toward food. Do you know the word for it? Yes, "Mottainai."

Mr. Brown: Today, I'd like to ask you about the digital learning our school introduced three years into. What do you think about it?

Naomi: Now I'm enjoying this new learning system, but I was a little nervous at first. It took me some time to understand how to use it.

Daiki: In my case, I was interested in the new learning system at first, but now it is so common for me that I don't feel anything. I don't mean I don't like it, though. Misaki, how about you?

Mr. Brown: You two have different impressions about it, right? Misaki, what about you?

Misaki: Well, I think it's a good system because I can always ask teachers questions while I'm using it.

Naomi: I think so, too.

Mr. Brown: What made you think so?

Naomi: Because I can ask questions online without talking to the other students.

Misaki: You're right. I'm a bit shy, so I can't always express my opinions in front of other students. So, it's good for students like me.

Mr. Brown: I see. Daiki, can you tell us about your opinion?

Daiki: I can get information instantly that I want with this system.

Mr. Brown: That's one of the huge advantages of this system. Now we're using digital learning for five subjects: Japanese, math, science, social studies and English. What subject do you think is the most suited for this system?

Daiki: In my opinion, social studies is the most suited. When we study the French Revolution, if we can look at a map of France or a timeline of French history at the same time, we can understand it more clearly and deeply.

Misaki: For the same reason, it'll be useful for science.

Naomi: I think it's the best way to learn English. We can practice our speaking by listening to when native speakers are speaking. We can also record our voice and check how correct our English is.

Mr. Brown: So, what do you want from digital learning in the future?

Naomi: I want to take my tablet home and use it at home for homework.

Daiki: We can use our tablets at home when we want to know more.

Misaki: We don't have enough time at school, so I want to use my tablet at home to broaden my knowledge.

Mr. Brown: Is there anything else that should be improved?

Misaki: Well, the tablets sometimes don't work properly. It takes time to fix them.

Mr. Brown: Yes. That's a problem. Anything else?

Naomi: Sometimes I have a headache after class, and I move my shoulders to relax just as my mother does.

Mr. Brown: Maybe it is because of eyestrain.

Naomi: What's that?

Mr. Brown: It means you have used your eyes too much and they are tired. You had better take a rest sometimes when you use a digital device.

You have probably heard about the word “5G” several times. Do you know what it is? It is the name of a new mobile communication technology. It is named 5G because it is the “5th Generation” of a technology which has been upgraded four times over the past few decades. The focal point was mainly on the data speed from 1G to 4G, and each helped us communicate with others around the world more easily. However, 5G has been designed as a new communication tool for a completely new age when we will be able to connect to everything around us, or the so-called age of IoT (Internet of Things).

Each generation has had its own key features, and 5G is supposed to have four. The first one is its super-high speed. 4G is already fast enough for most uses, but 5G will be much faster. Technically, 4G reaches the data-speed of up to 400 Mbps, while 5G is expected to reach a max of 10,000 Mbps. This means that you will be able to download data-heavy media surprisingly fast. For example, you will be able to download a two-hour movie in three seconds.

The second one is having multiple simultaneous connections. The word “multiple” means “many,” and “simultaneous” means “at the same time.” So, in other words, multiple simultaneous connections means that a single base station will be able to deal with far more connections at a time. More concretely speaking, you can now connect several PCs and smartphones simultaneously to a base station with 4G, but 5G will allow you to connect about 100 devices. This will enable you to communicate with such electronic home appliances as your television, refrigerator and various home security devices, all at the same time.

The third one is its ultra-low latency. “Ultra” means “super,” and “latency” means “waiting time.” So ultra-low latency means that you can minimize delays, or time lags, in your networking. Let’s think about autonomous cars. You will never want to ride in a car in which you must always expect long delays in communication. A short delay in reaction may cause a big accident on the road. Therefore, by minimizing delays in reaction time, you can maximize the safety of autonomous cars. Also, it is expected that ultra-low latency will be essential in fields like remote control robots and remote medical care.

The last one is its super-low cost. 5G is supposed to promise lower electricity costs, and this will be achieved by allowing multiple simultaneous connections at one station and reducing the whole running costs. In short, by using 5G, you can reduce huge communication costs and expect fixed-price packet plans at lower prices.

What will our future with 5G be like? In the first several years after the 5G service starts, a lot of changes will have occurred in our use of smartphones. For example, you will be able to attend a high-definition remote meeting without any delays or freezing, even when you are physically hundreds or thousands of kilometers away. More importantly, it is expected that real big changes will come to our everyday life about three to five years after 5G becomes common all over the country. Autonomous cars will be realized, and you will be able to reach your destination in your car without having to drive yourself. Or, you may be able to call a taxi without drivers with your 5G smartphone. A fantastic future seen in science fiction movies is just around the corner.

I'd like to tell you about the history of Montreal, Canada. Have you ever heard about this city? Canada is in North America and was a British colony in the past. However, surprisingly, I learned that there are people there who speak French. Many of them live in the province of Quebec, and Montreal is its capital. I wondered why and decided to research Montreal.

The first Europeans to arrive there came from France in 1535. French people began to trade fur with the people who had already lived there for a very long time, and built a colony. But in 1760, it was occupied by the British Army and later became a British colony as a result of the Treaty of Paris. Most of the French colonies in North America fell into the hands of Great Britain. Montreal became a city in 1832, and was the capital of the Province of Canada from 1844 to 1849.

It showed remarkable economic development and became an important center of transportation. It was the most important economic center in Canada.

The Great Depression and World War II negatively affected the city of Montreal, but it recovered soon. In the 1960s, subways and tall buildings were built. In 1967, the World's Fair, or Expo 67, was held there, and in 1976, the Olympic Games were held there. All these events made Montreal and the Province of Quebec famous over the world.

As Montreal gained international status, more and more French-speaking residents started to desire to be independent. Radical groups committed kidnappings and bombings in 1970, and the military occupied the city. These events are called the October Crisis. Though the situation calmed down, a lot of English-speaking residents and companies left the city mainly for Toronto. One of the reason for that was that French became the only official language in Quebec. Montreal continued to be an important city in North America, and became the second largest city in Canada after Toronto.

In the 1980s, the speed of the economic growth of Montreal was relatively slow, but in the 1990s, there was more construction of new buildings and new subway lines. The city attracted offices and people from international organizations. Montreal has once again become an attractive city for living and working.

In 1990, a group of Mohawk people rose up to demand ownership of land in the town of Oka in Quebec. This incident is known as the Oka Crisis. This happened because of the extension of a golf course. The extension was cancelled, and the rights of the native people were protected.

Because of its historical background, the city of Montreal has a special character: a mixture of French and British cultures. You can see churches, cathedrals, and other buildings from both cultures there. Montreal is the home of a world-famous circus company, Cirque du Soleil. The Montreal International Jazz Festival also attracts a lot of people.

Do you know the meaning of "Montreal"? It means "king's mountain" in French. The name came from a small mountain in the city called Mount Royal. While I was doing research on the city, I became really fascinated by it, and now want to visit it someday.