



# LAN

STUDENT EDITION, NOVEMBER 2020

## Education × Communication = PenTomo

Among numerous disease prevention measures being taken in our everyday lives for COVID-19, one that is taking the most toll on students is mandated school closures.

While those with online classes and parents who could help them on their studies have received sufficient support for their education, those without such educational aid are left with no choice but to continue their school work on their own. Consequently, the long days of isolation has shed greater light on educational inequality between students.

In addition, mental and financial strain from teleworking or unemployment has prompted a rise in domestic violence and child abuse cases. According to Spousal Violence Counseling Support Center, reported cases of domestic violence and child abuse as of April 2020 was 13,272, a number 30% higher than last year (Figure. 1), and

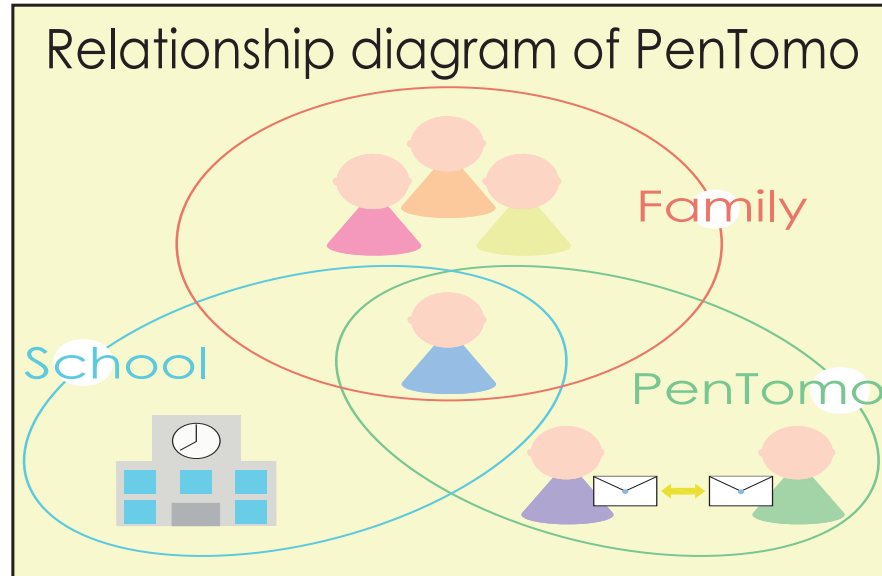


Figure. 3

Credit: Fumio Kawasaki

66,789, with an increase of 12% since January to April of last year (Figure. 2), respectively.

In contemplation of prospective means to mitigate such aforementioned issues, PenTomo comes into play (Figure.3).

PenTomo is a project where elementary school students exchange letters with high

school students. PenTomo could lead elementary schoolers to an educational experience, as they will hone etiquette rules and grammar skills required for writing letters, and learn about the life that awaits them after elementary school by getting to know their older peers. Consequently, PenTomo could

help them to become proficient writers and give them the motivation to continue their studies with excitement for the future to come. Furthermore, PenTomo will enable them to make friends with anyone from anywhere, regardless of whether they own any electronic devices (many elementary schoolers do not own their own communication devices at their age), even during quarantine. Having a friend who you are comfortable enough with to write about problems at home may lead them to get the help that they need to resolve their domestic crisis.

PenTomo has the potential to uncover hidden educational and domestic problems which are prevalent in this society, and with it, we will be able to forge precious connections that we so yearn for, especially in this difficult time. We hope that PenTomo will be utilized in a fun and practical way that could promote education and the well-being of children from this coronavirus era and on to the future.

By Akari Tanaka, Fumio Kawasaki, Hinata Tanno, Miho Yako, Miki Kiyonaga and Nonoka Sato

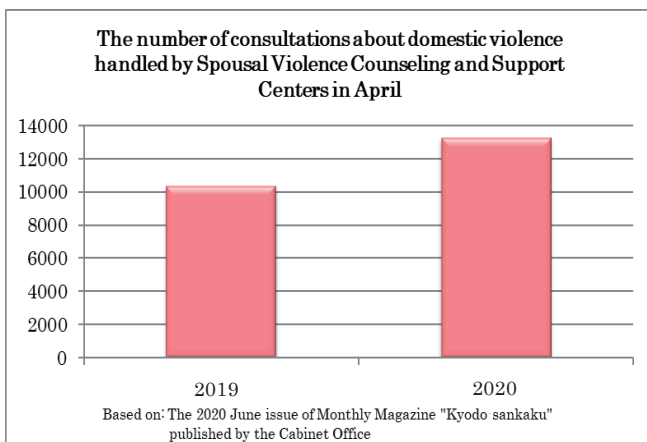


Figure. 1

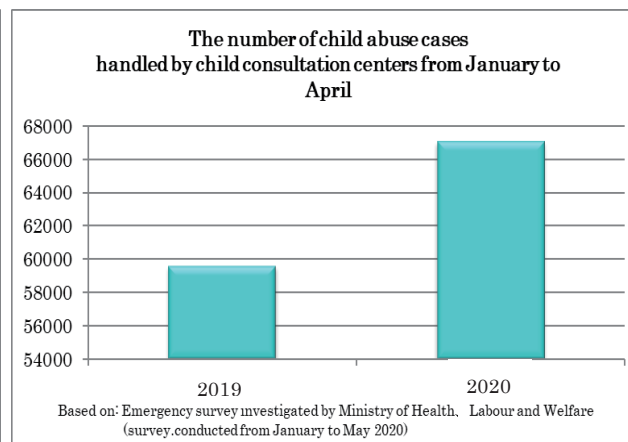


Figure. 2

Credit: Fumio Kawasaki

## ABOUT US

Established in 1882, Ochanomizu University Senior High School (formerly known as Tokyo Girls' Higher Normal School) is one of the oldest girls' high schools in Japan.

LAN is brought to you by the aspiring students of Ochanomizu University Senior High School in Bunkyo-Ward, Tokyo, Japan. It is the culmination of our students' independent projects to strategize and design a solution to current global issues.

LAN consists of three consecutive themes which are: problems that have taken shape in the midst of the coronavirus outbreak, issues that arise in the face of ubiquitous disasters that plague Japan, and the future that awaits us in the post-COVID-19 world.

COVID-19, with its devastating ferocity, has not only demonstrated our fragile way of life, but also led us to the harrowing realization that we are

a part of a global society; that everything, both auspicious and catastrophic, could spread throughout the world to elicit a revolutionary change in life as we know it. Thus, we have reached the inevitable conclusion that every worldwide issue must be taken as our own if we are ever to overcome them. Now, more than ever before, the future of our world is in the hands of each and every one of us.

As LAN (Local Area Network)

eponymously suggests, we hope to play a small part in creating a network of awareness for universal obstacles prevalent in these turbulent times. Although we are at a time in history where we are encountering an entirely unprecedented lifestyle that prompts division and abandonment, we must all take a moment to remember that there is light at the end of the tunnel. We are all in this together.

# Making Informed Choices Can Help Prevent Spread of Diseases

COVID-19 has drastically changed our lives as we know it. However, humans have always found a way to coexist with various deadly infections since ancient times, and the day just might come when we can have our old days back even with the virus still around.

Although we may feel like medicine will take care of everything when it comes to any common sickness or irregularities

in the body, taking the wrong type or amount of drugs could have fatal consequences.

Have you ever heard of antibiotic-resistant bacteria? They are the bacteria that have changed over time in response to the overuse of antibiotics. They stop responding to the antibiotics designed to kill them and render infections caused by them harder to treat. As a result, the infections could become deadly, and the risk

of disease spread increases. Thus, it is crucial that we take the right prescription of drugs and make informed choices to ensure the safe use of medicine.

We have made three different types of leaflets to raise awareness of infectious diseases and disease prevention. On the front side of the leaflet are catchy phrases with striking designs, specifically, "Infectious diseases: you may not know it, but it's there" (Front. 1), "Our immune systems deserve some rest, too" (Front. 2) and "Going somewhere? So are infectious diseases" (Front. 3). Every phrase addresses the same issue; that infectious diseases are dangerous and are all around us. On the back are information related to infectious diseases such as genome editing, social prejudice and discrimination

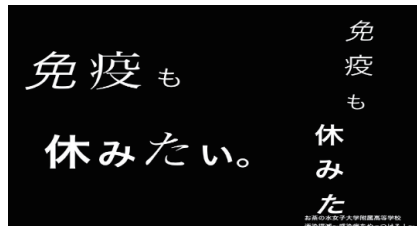
(Back). We have distributed these leaflets in hospitals and banks of various locations in the prefecture of Chiba, Japan. We are working to distribute our leaflets in more places in the hopes that they reach the hands of many in the oncoming "twindemic", as many of the issues and tasks presented in the leaflets could be hints to dealing with COVID-19 as well.

Hopefully, microorganisms like antibiotic-resistant bacteria serve as a warning for everyone to become an informed consumer. Learning more about infectious diseases and ways to treat it might just save you or your loved ones' life someday.

By Ami Negishi, Hiromi Yokoyama, Mioko Kurokawa, Rika Matsumoto and Waka Yokota



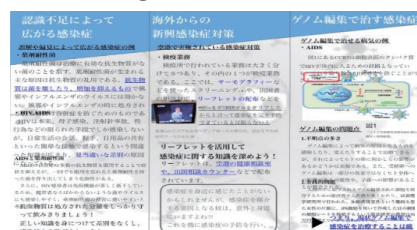
Front Page. 1



Front Page. 2



Front Page. 3



Back Page

Credit: Hiromi Yokoyama, Rika Matsumoto

# When Do We Feel Stress?

Stress. That dull ache in your chest, butterflies in your stomach that you come across once in a while? It's a familiar feeling for all of us, but in what specific situations are people more prone to feeling stress?

In December, 2019, we conducted questionnaires in Ochanomizu University Senior High School, from which we received 227 answers. We asked the students to rate the intensity of stress they would feel in the following situations: being squeezed into a confined space, having an argument with parents, not seeing progress in their studies, and using electronic devices for a long time. In the survey, 52% of the respondents answered that they are either moderately or strongly stressed in confined spaces (Figure.1), 89% in parental conflicts (note that a whopping 56% of the respondents felt strongly stressed)(Figure.2), about 81% by not seeing progress

in their studies(Figure.3), about 39% when using electronic devices for a prolonged period of time (Figure.4).

The results of the questionnaire suggest that the vast majority of high school students tend to experience stress regarding their studies, and relationships with parents. Therefore, we have been able to conclude that stress factors are mainly found to be closely intertwined with daily and personal life.

Since COVID-19 has fundamentally interfered with our daily practices, it is no doubt that we have accumulated more stress in the past couple of months when we had to be quarantined due to the coronavirus. Many people were overwhelmed with the extraordinary lifestyle and felt a great deal of stress. Our survey conducted during this period at Ochanomizu University Senior High School showed that many students experienced stress from

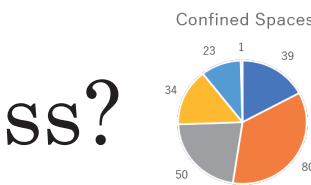


Figure.1

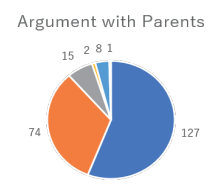


Figure.2

Lack of Progress in Studies

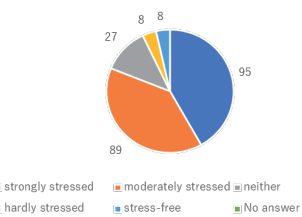


Figure.3

Prolonged Use of Electronic Devices

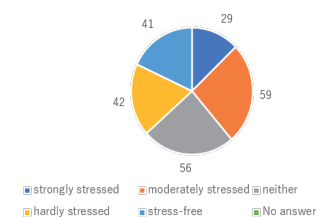


Figure.4

Credit: Ikue Suzuki

not being able to go out, not seeing their friends and loved ones, and not getting the motivation to study. However, when encountering hopelessness and anxiety, we have to adapt to the new normal of our society today, or we will never have our old days back. Fortunately, there is a way for us to feel a little less anxiety and keep your hopes up, and that is none other than practicing social distancing. Avoid going to crowded areas, sit side by side or diagonally when talking to friends,

and most importantly, keep your masks on.

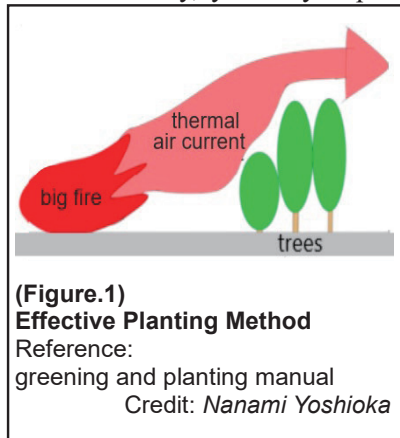
They may be the kind of things we have been hearing over and over. Nevertheless, it certainly is not rocket science and it does not hurt to follow them if it makes our lives a little less stressful.

By Asuka Kikuchi, Ikue Suzuki, Mizuki Tezuka, Momo Ono and Toshino Miyauchi

# We Must Secure Evacuation Sites Unexposed to Earthquake-Initiated Fires

As one of the most severe disaster-prone countries, Japan is known for its frequent and deconstructive earthquakes which occur as many as 2,000 times per year. If an earthquake directly hits the Tokyo area, the number of earthquake-initiated fires is assumed to be up to 2,000, and many people may be trapped as flames are set across the city center, killing an estimated 70% out of the 23,000 victims. Accordingly, we must secure evacuation sites which are less likely to be exposed to these fires.

Believe it or not, many people are shielded from fires after earthquakes by none other than trees. Normally, you may expect



the opposite, as trees burn and seem to help spread fires in a wildfire. However, in the Great Kanto Earthquake, many people in areas full of trees actually survived when a large fire broke out. For instance, after the earthquake hit, people who ran to take shelter in Kiyosumi Garden, which had been covered by trees, survived the fire. Unfortunately, the fires destroyed Honsho Hifukusho, the remains of a clothing depot where there were no trees, and killed nearly everyone taking shelter inside. Although size and geographical conditions of each land were not so different, the two sites were met with vastly different outcomes. This strongly suggests that trees had played a significant role in covering an open and exposed area from fires, and helped save countless lives.

Furthermore, according to Hiroshi Nakajima, a specialist of fire-retardant trees, it has been found that trees that contain a large amount of water and little oil are resistant to fire. In addition, planting shorter trees inside of the evacuation site, and taller trees

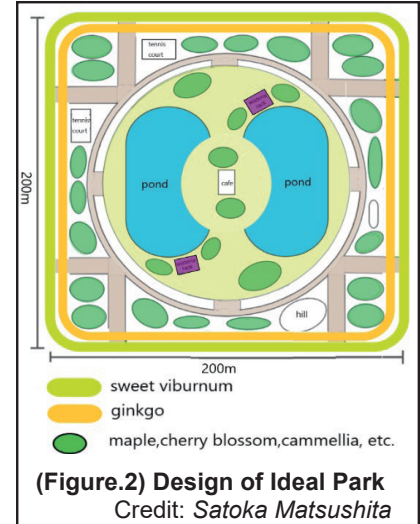
outside has been observed to be an effective planting method for blocking out fires. (Figure.1)

Keeping these hypotheses in mind, we have made a To-Do list to summarize methods for preventing fires, and designed a park that could also be used as an evacuation site. (Figure.2)

However, it is difficult for some urban cities to build a park large enough to prevent a fire. Consequently, one of the only alternatives is to turn cemeteries, a shared grave site, into the evacuation sites themselves, and plant trees inside to turn the location as close to fireproof as trees can manage. Taking that into account, we could also switch a tombstone to a tree, and conduct what is otherwise known as tree burials. In fact, this will be beneficial for an evacuation site, as it will increase the number of trees and

create a safer environment to protect people from fires. At the same time, they are less likely to be damaged by an earthquake than tombstones.

Nevertheless, by installing many trees the visibility will get worse



and it may become a hot spot of crime. Though there is an inexorable need for evacuation sites where people would not have to fear for disasters that strike after earthquakes. Hence, we greatly encourage the establishment of evacuation sites invulnerable to fires.

By Ayano Mori, Mai Sasaki, Reiko Tomita, Satoka Matsushita and Yukiko Nomura

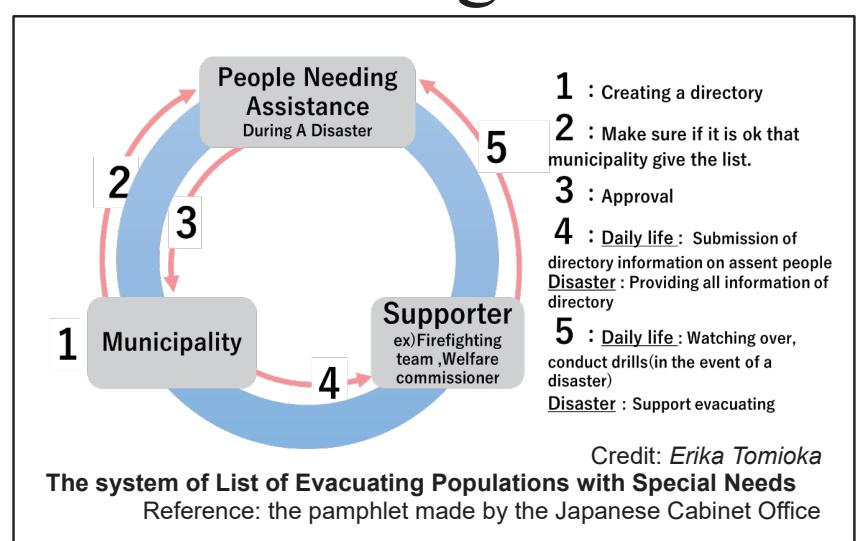
## Evacuation System for the Disadvantaged

According to the Japanese Cabinet Office, in the Great East Japan Earthquake, the number of deaths among the elderly over 65 years of age out of the total was about 60%. Furthermore, on the coast of Miyagi Prefecture, an area that suffered substantial damage by the earthquake, the mortality rate of the disabled was 3.5%, while the mortality rate of all residents in the same area was 0.8%, according to the Japan Disability Forum. Such statistics alone underscore the need for systems to safely evacuate individuals needing more support.

"List of Evacuating Populations with Special Needs" is a support system run by the Japanese government. Municipalities are allowed to provide information, with consent from the information providers, to those who help evacuate individuals with special needs. However, in the event a disaster actually occurs, they are

permitted to disclose their information without their consent. If we can make use of the system, people requiring support can be watched over by helpers not only in an emergency but also in everyday life without the need for complex processes.

Although we may benefit from having the list, a number of concerns remain. To begin with, the criteria for activating the system is unclear and may vary depending on each local government, and since they generally take a cautious stance on the disclosure of personal information, they are reluctant to use the system. Moreover, in previous disasters, several local governments were not able to put the system to good use, as the information they had collected had not been completely updated. An even more fundamental issue was power failure which made it impossible for people to even use



the system in the first place. So far, the system is not enough to be instilled in our society.

The reality is that there are few people who really know about what some people have to go through to evacuate during an active disaster. However, spreading information via any means is something that any of us

can do. That is the first step to realizing a society where no one is left behind when a disaster occurs.

By Aimi Taura, Erika Tomioka, Rin Sorimachi, Saki Kamiyama, and Yukino Terada

# This App Helps You Prepare for Earthquakes

Let us imagine a situation where you are hit with an earthquake at this moment. Would you say that you are prepared? In Japan, people are forced to confront many disasters. According to "The number of the dead and missing" published by the Cabinet Office, earthquake kills more people than any other disasters at once, topping the casualty rates of flooding, which occurs most frequently in Japan. Furthermore, according to "public opinion poll

of disaster prevention" published by the Cabinet Office, there are 10.8% of people who are not prepared for disasters. These statistics alone are clear signs that even people living in the most disaster-prone countries are not yet ready for an oncoming disaster. This has inspired us to develop an app that acts as a picture book for each cases of disasters which targets the younger generation.

Our game aims to provide a visualized guide for what to do in

times of disasters in an enjoyable way.

In the game, the player must first prepare evacuation goods. The time setting then switches to after the disaster-strike, and the player who is in the city must go to a school registered as a shelter. The player faces many obstacles on the way, in which they would have to choose the three useful items to move on from each obstacle to the next. The items included are water, newspaper, saran wrap, etc., all of which can be used for many purposes in a disaster.

We have been able program this app using a software called SWIFT, which is a programming application for Android and iPhone. The app only uses colors red, blue and green and prevent digital eye strain, and we have programmed the UI (Use Interface) design and the UX (User Experience) design for the

game to be played in the easiest way possible. In addition, the game presents the least number of obstacles and includes many dialogues so that the players could have a lasting impression on the most essential pieces of information needed to survive.

We hope to develop this app for more various types of natural disasters other than earthquakes and tsunamis, such as typhoons, floods and volcanic eruptions. The app can be used as a gateway to learning more about disaster prevention and visualizing natural disaster events in the real world, and may help save many lives when an actual disaster strikes.

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By Arisa Chishiro, Chiho Ito,  
Megumi Karasawa, Rina Onishi  
and Ringo Kawamura  
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# JIZO ATSUME To Bring Back the Tourism Industry

Do you know Jizo? Jizo is a guardian deity who protects the souls of children from going to hell when they die. We see them often on the roadside as well as temples.

Due to COVID-19, the tourism industry is seriously damaged by the declining number of tourists visiting Japan. To tackle this issue and promote travels to various prefectures in Japan, we have developed an app called JIZO ASTUME. It is a free app that combines gaming and real-world elements. The game uses the players' GPS to track the location of Jizo. Once the players find them and take pictures, they then get points which can be exchanged for coupons in arcades in the real world.

Jizo is an ideal element for a game that promotes tourism in the suburbs, in that we can find them in any city or prefecture, regardless of whether they are in the city or the countryside. In addition, as Jizo incorporates the

beliefs of both Buddhism and Shintoism, which is a unique Japanese religion, Jizo is an important part of Japanese culture. This app can invite tourists not only to popular tourist sites, but also to the countryside where not many people tend to visit. Thus, this app may inspire many tourists to visit various sites wherever they may find Jizo. In particular, some of them may even encounter various lifestyles of people living in the suburbs and come across a deeper understanding of their way of life. As a result, players could gain an interest in Japanese culture and values.

Imagine a new phenomenon: "Jizo tourism". Thanks to the popularity of Jizo and their calming and zen-like presence, Japan may see a boost in the economy of the tourism industry. We hope that foreigners will take the time to see all of Japan and explore the beautiful scenery of the country's suburbs.



Logo of JIZO ATSUME

Credit: Aya Nakamura

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## LAN

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