Thoughts and suggestions on the activity with University of Tsukuba
On 12th October, the University of Tsukuba came to Shanghai High School for academic communication.

This, perhaps, is the biggest event ever for it involves some other schools. Of course, it is a impressing one

First, it took English as the main language used, giving students a means to feel the real connection with the whole world. English is the most widely language used all over the world. However, this also reflects some problems: the defence part is full of Chinese and Japanese, which can’t be smooth. So, this could be better if the language is switched back to Chinese, which is more acceptable to all the students.

Secondly, there are many lectures given by professors, which involves some fashionable concepts such as the isotope. This is clearly attractive and interesting. However, the concept is a little hard for those students who have no knowledge about it. So, many students may consider this as a tedious lecture. The phenomenon of sleeping is common. In my opinion, if the professor can make the whole lecture more interesting, not just the topic, it could be better. For example, before straightly beginning the topic, there may be some opening words, such as some interesting facts of the topic.

Also, there is a part called group discussion. At first, I thought that this could be a boring one for I have no concept about environmental protection. However, the professor gave us some important theories about it and allowed us to raise any problem that we’d like to. I think that this is the greatest part of the whole day’s activity, for it can make every student to listen, to think, to ask. This arouses the very interest in the bottom of my heart on how to protect the environment. One suggestion: I don’t think that students should be divided into groups. Those who are interested in two or more aspects can be disappointed. If the groups are cancelled, this part can be a more free one.

What’s more, as I am also carrying out a project, the lectures and presentations given can also give me some advice on how to write a report that can be acceptable to all. The presentation by our peers is great.

What the activity teaches us is not only some recent experiments carried out about environment but also the basic theory on how to carry out a complex experiment. Although this communication activity has a lot of problems, it can be a great one as a whole. I hope that this activity can be more successful in the future, giving students more help.
Dear University of Tsukuba:

We really appreciate such chance for us to have academic exchange with you, from which we have learned a lot that can’t be attained from the books or the regular class. To further improve the efficiency and the experience as well as my faithful thoughts, I’d like to put forward some proposals.

One thing recommended is that next time we hold such academic exchange activity, there can be more private talking with the professors from the University of Tsukuba. It’s not only a great honor for us but also a precious opportunity to have access to the powerful minds and brilliant ideas from such a well-respected university. It’s true that such form as speeches & lectures can share a certain degree of what Shanghai High school and the University of Tsukuba has achieved in the academy, however, I can still an invisible and unavoidable barrier between the professors and us. On the contrary, later on that day, the short private talk with the professor left me with a deep impression, which fully showed his wisdom, humor and modesty. In my opinion, the such form as salons can greatly shorten the distance between us and maximize the benefit for both schools.

Another issue which needs to be pointed out is that we need to prepare more thoroughly before the activity. During the speeches, because of the frequent terms and the inevitable accent, it was rather hard for us to comprehend fully what the speaker was talking about. As a result, it didn’t turn out very well. For the better understanding next time, there can be more detailed preparations more than prints of PPT so that we can have a better comprehension and experience.

That’s basically my two suggestions for the academic exchange.

Wish a long and bright friendship wish the University of Tsukuba and Shanghai High school!
To dear professors:

I have collected the suggestions and the thoughts from my fellow classmates and now I have put them into one passage to represent the summary and food for thought after the academic exchange.

First, the conclusion is about the introduction of the professors and the University of Tsukuba. Professor Yang introduced the Life and Environmental Science and the G30 program for foreign students. To be frank, as for me, I am really interested in the program and I listened very carefully. The professor introduced the language used in the G30 program and the acquirement needed in this course. Also, I knew something about the educational issues which this program can provide. Plus, I met some alumna and really admire them. But I still have some doubts about the University of Tsukuba. The professors only introduced the major courses in Life and Environmental Science, but I still wanted to learn some information about other majors such as electronic engineering or energy or economy. Although this is an academic exchange, I still wanted to acquire some more contents about the extra-curriculum and after-class activity in the University of Tsukuba. For example, I would like to know something about the students union or students clubs and what courses the University of Tsukuba has. I also wanted to know whether the courses are taught in classes that are only made up of a few students, or whether the courses are taught in the form of lectures or whether the courses are taking place in the form of discussions.

Next is about the thesis defense procedure. This was one of the most important procedures in the exchange. All the student of the research groups had benefited from the defense. The first research was the research of PM2.5 & BC in the environment of Shanghai Metro. The researcher pointed out that he really benefited a lot from the suggestions and the questions from the professors. The biggest problem was about the collection of the data. The professors pointed out that in such a research, data is the main evidence to show why the researcher’s solution is feasible. There must be a large of amount of data based on the research and they also need to be available to most of the situations. For example, only three times in a year can’t demonstrate how the PM2.5 &BC has the influence on the environments. These data can’t show the general version of the difference of the carbon emissions during weekdays and weekends. At last, the professors made some suggestions about the making of the PPT. The researcher should use a brighter and clearer color to present his presentation. Chunhao Yang accepted the suggestions with modesty, but he also mentioned that he would like to have more discussions about the environmental issues further. To improve the skills to do the research, Yang suggested the professors to ask more questions about the methods to research and the prospective of the project. He hoped that we could have the opportunity to have a tour to the campus of the University of Tsukuba and tour around the lab.

The second research was the composition and characterization of eutectic phase change materials applied in external walls. This was actually the best-going presentation. The researchers said that the questions professors asked were exactly
what they had prepared. So the researches believed that full preparation played the vital role in the thesis defense. As for the conclusion part of the presentation, the professors suggested that they should add some answers to the questions they raised at the beginning of the presentation and the solutions to the hypotheses they raised about the topic. Other important issues like the application prospective should be added to the conclusion part. The biggest problem of this group was the lack of display of the purity of the chemicals they used to do the researches. In the paper, the researchers had listed the purity of the chemicals. However, in the presentation, they forgot to mention this important part. As a result, the professors missed the important information of the purity of the chemicals. So there can be two suggestions: first, the professors can communicate with the guiding teacher of the project and learn all of the necessary details of the research; second, the researches may put the missing but vital information in the presentation clearly enough so that the professors can catch the point easily.

The third research was distribution of microcytic in the substrate sludge of Taihu Lake. The professors had some doubts about the geological positions and the environmental impacts the five collecting points around Taihu Lake have on the results of the projects. The researchers explained that for lack of time, they had skipped some of the points around Taihu Lake that they might not have the exact and accurate figures. During the procedure of the defense, the speaker was quite anxious that he almost forgot his words. He also need his partner who is really good at biology and chemistry to help him out with the technical questions. During the procedure, the researchers had some difficulties explaining the professional terms the result of which leave the professors in confusion. So the researchers suggested that an interpreter is needed to translate the words to the other professors so that everyone can get what the researchers mean exactly.

These are the conclusions about the thesis defense.

In the afternoon were the magnificent lectures by three professors.

For the lecture made by Yamanaka, I really liked the he got into the main course. He first pointed out two things that don’t seem to have any connections with the topic: how to solve the problem of toxic food and toxic water. He raised two solutions, one is to purify or avoid eating them. The other is tracing back to the original pollutants. Only by tracing the sources can we thoroughly solve the problems. My fellow students are very interested in the topic of the tracing by isotopes, but some of the students pointed out that they wanted to listen to more about the research the professors are doing, including the real examples of how the professors do their researches, how to trace the isotopes the professors relieved. Some of the abstracts of the professional background could be compressed.

The second lecture was made by professor Asano which was a little bit difficult for us. This lecture contained a lot of terms of soil, some of which are written in abbreviations on PPT. This could confuse some of the students who don’t have professional background. What’s more during the lecture, the PPT shown on the board is in a way different from the PPT printed on the paper, so some of us get really get the information from the board. But on the whole, we really appreciate the lecture.
made by professor Asano, especially the Q&A procedure. When asked whether the procedure of modernization will lead to the soil pollution, professor Asano explained that the development of the cities and countries can’t stop and in the meanwhile, we should protect the environment even if we have to modernize. Our generation is receiving the best education ever in history, and we have the heaviest responsibility to help protect the environment. Her words inspired all of us. Her words could inspire a generation!

The third lecture was made by Gandan Jiang. Her lecture let us know the difference between how a high student do a research and how a graduate do the same research. After hearing her presentation, my fellow students get that the graduates are researching for the things they learn during the research procedure and the true result they get from the research, no matter how different can the result be from the theoretical figures. Even if they get a surprising result, they will try again to make sure every step is on the right track. On the other hand, we high school students tend to show a strong desire for a perfect result that is very close to the theoretical one. I really admire her because she had a very clear logic. From the very beginning, she was doing her presentation on a line of questions and solutions. She followed her mind and made every step clear. First, the disease came up, medicine was needed. As soon as the suitable kind of material was found, differentiation was needed. Then came the question, what may be the difference between the two kinds of medicine. Will the effect be the best when we use A or B or mix those two in a certain proportion. Although, we didn’t really know what that medicine was actually called in Chinese, we can get her train of thought clearly by following her into her presentation. She is our example to know the truth and the true spirit of scientific researches.

Last came the most exciting part in which everyone could participate: group discussion. In professor Yamanaka’s group, we had a further discussion about whether the tracing with isotopes have advantages more than disadvantages. We analyzed the limitations isotopes have when tracing water or other materials. However, this procedure somehow lack the active atmosphere as a group discussion. We all suggest that when facing relatively difficult problems or topics, we could express our own opinions no matter wrong or right instead of listening to the professors’ explanation. I think only with hypothesis and procedures to prove or prove against the hypothesis can we understand the truth behind the phenomenon.

Although we had a tired day, we really enjoyed our day. We still want to get more information and gain more knowledge from the professors from the University of Tsukuba to expand our horizons. Therefore, we all hope that the exchange with the University of Tsukuba could be prolonged. We even hope that we could someday tour around the campus and take a whole view of the magnificent university!
Dear professors,

I’m the student who made a presentation on that day about microcystis in Taihu Lake. My classmate and I enjoy the chance to communicate with Tsukuba University and I’d like to tell you my feeling about the communication and some suggestions.

Firstly, I have done some researching works after the presentation and defense. Besides correcting my slides, I have thought over the data about the content of chemical elements and found there should be close relation between NH4 and the growth of microcystis. That gave me an idea of specific compounds may also play an important role in the growth of microcystis.(We just focused on elements before the defense.)

What impressed me most is the discussing part in the afternoon. I asked the professor several questions about soil and underground water pollution in China. Unluckily, time was over when I raised a question about the influence of nuclear radiation on soil. Therefore, I suggest that we could have a longer discussion part. Also, we could make the part more free so that students would go to ask any professor about the information they eager to know about.

A few of my classmates seemed to be shy on the event. They just listened but didn’t express they own opinions. If it’s possible, I could think of a more frequent communication between students of Tsukuba and of Shanghai High School. We could easily get access by e-mail or other ways of online contact. Besides the students, it may be beneficial to have a casual dinner between professors and students of SHS. We could talk about more than the projects and know about each other.

It was also a really tiring day which was full of lectures and presentations. Some students couldn’t concentrate on the lecture in the afternoon after thought for a whole morning, so is it possible to expand the time to have a longer communication because it seemed to be pressed for time to go through all the events in one day.

Furthermore, there should be a defense part that questions are raise by students. There were students from two schools on that day and I still had some question to inquire the students from No.2 High School of East China Normal University. Therefore, we could ask each other about the presentation and answer. After the question and answer, professors could remark on the quality of questions and make a little speech about how to listen to others presentation and how to raise questions.

Overall, thank you a lot about what you taught us. Welcome to SHS again in the next year.
Reflection on the Academic Exchange

I’m very grateful for the privilege to attend the academic exchange program with professors from the distinguished University of Tsukuba. In the Thesis Defense process, I not only appreciated my classmates’ performance on their environmental projects, but also witnessed a professional and formal Q & A process. The professors’ erudite and practical suggestions on the students’ projects made me admire their experience and academic achievements. Although some questions presented by the professors still could not be resolved by the students, they led a clear path of how to ameliorate the project and what else should be added into their presentation. After that, the alumna’s report of her college life and research findings about agriculture and environment was encouraging of great fun. Finally, the two speeches given by professors about isotopes tracking and soil drew the attention of many of us. Their innovative studies and bold presumptions encouraged many of us on the road of working on our projects. Finally, a professor who’s adept at microorganism gave a mini-lecture to some of us, explaining the out and inside structure of viruses, and why the property of anti-biotic occurs.

After a whole-day learning process, I had lots of reflections on my own project and the development of my own thesis. The day is really worthwhile, and based on my own feelings, I have some suggestions for the following academic exchange programs in the future. First, more models and apparatuses can be brought to the lectures by professors in order to let students have a more vivid understanding of their arenas of study. For example, by bringing a model of the structure of a molecule, we can get a clearer picture how the substance maintains the specific property. By showing a giant picture of how the isotopes are distributed in a specific area, we will marvel at the tremendous use of the technology of isotopes tracking and its practical usage. Secondly, the discussion part can be more specific and target-focusing. Though we had learnt some basic knowledge about microorganism during the process, the knowledge seemed to be minute compared with the long-term study of the subject and piles of articles awaited to be read by the learners. In contrast, why can’t the process be an introduction to the field by doing some simple experiments and discussing on a specific topic which everyone can share some idea about? In this way, both professors and students can be more devoted to the ‘discussion part’. Third, the organizer can probably invite some former winners of the technology contest to set an example for us of how to develop a presentation and how to act properly in a thesis defense process.

I’ve harvested a lot throughout the whole day, and the Academic Exchange Program with professors from the University of Tsukuba has taught me both the perseverance in working on scientific researches, and the beauty, the usage of nature and environment. Today, our environment is fragile and requires taking care of. It’s our burden to cast unremitting efforts to protect the environment by innovation and advanced technology, both from at home and abroad.