



SAKURA SCIENCE HIGH SCHOOL PROGRAM

2019

SRI LANKA

Mrs. L.G.NISANSALA
GUNATHILAKA

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ACKNOWLEDGEMENT

I would like to express my deepest appreciation to all those who provided me a greater opportunity to join the sakura science exchange group as a supervisor. A special gratitude I give to the honorable minister Mr.Akila Viraj Kariyawasam, and the secretary of Ministry of Education Mr. M. N.Ranasinghe for providing me this valuable oppertunity . Also I would like to express my deepest thanks to, assistant directors of science, Mrs. B.W.G.Dilhani , Mr. Vipula Kulathunga who contributed their best to nominated ourselves as science teachers to join the sakura team as supervisors.

Furthermore I would also like to acknowledge with much appreciation the role of the staff of the science branch , foreign branch of ministry of education and external resource department. A special thank goes to Mrs.Chandani Abeywickrama for her cooperation throughout the journey who joined the event as the other supervisor.

In addition I thank the JST[J Japanese Science and Technology Agency for their endless effort on promoting science in a country like Sri Lanka.



Mrs. Nisansala



Mrs. Chandani



Hakeem



Farhath



Ravidu



Mithun



Udhish



Nethmini



Chamindu



Raleesha



Chathuni



Pasindu

The TEAM

10 students were selected to represent Sri Lanka at the SSHP 2019, based on their overall performances in their high school with two supervisors. I was selected as a supervisor from Ke/Dehi/Rajasinghe central college, Ruwanwella and the other supervisor was selected from St. Annes College, Kurunegala.

The members of the team are as follows,

Two supervisors –

Mrs. L.G.Nisansala Gunathilaka . [my self]

Mrs. Chandani Abeywickrama

Ten students showing above

Day 1



To begin with, while everyone else were getting ready for the upcoming Sinhala and Tamil New Year, 12 of us and our families gathered at the departure lobby of Bandaranaike International Airport, on Saturday the 13th of April. We, the supervisors and the 10 participants started our journey to Japan on the flight UL454 and arrived at the Narita international airport on the 14th April 2019 at 7.25 am. The flight arrived at the airport 10 minutes earlier than the scheduled time. At the airport we also met the Bangladesh delegation soon after we arrived.

At the arrival lobby, the personnel representing the Sakura science program and JICE (Japan International Cooperation Centre) warmly welcomed us and accompanied us to the Museum of Tokyo, but due to the lack of time, the visit to the museum had to be cancelled and we were

guided to an Indian Restaurant named Mantra, in Chiba, Japan for lunch. We were not travelling alone, but with the Bangladeshi team so that it was a great opportunity to make new friends.

Afterwards, all the supervisors, students and the coordinators from all four participant countries; India, Bangladesh, Sri Lanka and Vietnam were guided to a conference hall at Tokyo Bay for the orientation program. There, we were welcomed warmly by the JICE and JST (Japan Science and Technology Agency) officials and we were given a brief introduction to the 7-day program. There, the students were instructed how to behave and cooperate during the visit, and about the insurance policies we were subjected to. Next, the students were given a chance to introduce themselves to the others through a self-introductory session. It was a novel experience to all of the students and also for the supervisors. Then, we went to our accommodation, the Hotel Emion, Tokyo Bay.

After about an hour of rest, we were escorted for dinner at an Indian Restaurant nearby. Then we returned to the hotel to spend our first night in Japan.

The climate of Japan and Sri Lanka differed much. We noted that while it was burning hot in our local areas, in Japan, it was a mild cold weather brought out by the onset of spring. Cherry blossoms were in their full bloom, and we were lucky enough to enjoy its beauty. The weather was calm, nice and cold, inviting us to enjoy our program to its best.

Day 2

On the 15th April, all the team members woke up at 5.30 am, following our first wake up call. We felt strange, as it was quite sunny when we woke up early in the morning, unlike in Sri Lanka. We had our breakfast at a restaurant at the Hotel Emion Bay, sitting together with the national Rugby Team of Japan. At 8.00 am, we left the hotel to visit the JAMSTEC (Japan Agency for Marine-Earth Science and Technology). It was located in the Kanagawa prefecture.

We, the Sri Lankan team was paired up together with the Indian team, to spend the rest of the time. We were quite happy with the grouping, as it was a great opportunity to make new friends.



JAMSTEC

Japan Agency for Marine-Earth Science and Technology (JAMSTEC) has the main objective to contribute to the advancement of academic research in addition to the improvement of marine science and technology by proceeding the fundamental research and development on marine, and the cooperative activities on the academic research related to the Ocean for the benefit of

the peace and human welfare. At the venue, we were given a summary of their research areas and the schedule of the day.

We were given a guided tour to explore the research findings. Basically, we were given an idea of the deep-sea exploration and the vessels used for them. A model of Shinkai 6500; a submarine which could travel 6500 meters underwater, was prepared as an exhibit along with novel deep-sea creatures they discovered. They intend to find the roots of the evolution of life through their research. Further, they explore deep sea mineral resources and their composition for the benefit of the scientific community all over the globe..

Next, we were given a demonstration of the effect of high pressure in the bottom of the deep sea. It explains the changes of the matter due to compression. This was done by exerting a high pressure on Styrofoam cup by increasing water pressure in a closed vessel containing it, which resulted in drastic drop in the size of the cup. That explanation was supposed to give a clear picture of how large the water pressure is. Several questions were posed to the presenter by our student Mithun Samaranayake, and Aya San gave a perfect explanation.

Afterwards, we were given an introduction about another vessel named URASHIMA which was built 18 years ago and was used to create a clear topographical map of the sea bed. URASHIMA was designed to reach a depth of 3500 meters underwater. Some areas of the generated map were displayed as exhibits.

Next was a photographic session with Indian students and supervisors, with a research vessel in the background.

Lunch was arranged at a restaurant named “Nirvana”, and we had a pleasant Indian meal. We enjoyed lot with our team members, creating unforgettable memories.





KAMAKURA CITY

Our next destination of the day was Kamakura, the ancient city. There we got an opportunity to visit the great statue of Lord Buddha in Kamakura, and it was said to be the second largest statue in Japan. The statue was built in the midst of a garden, and the garden had many Cherry Blossoms in bloom. In the garden, we could visit the monument built in behalf of our former president Mr. J.R. Jayawardena in respect for his comment at the UN meeting for Japan. At the same venue, several souvenir shops were present where we could buy souvenirs for our friends and relatives.

Next, we went to a Shinto Shrine. We were allowed to pray at the shrine, following their traditions. The temple had many gates around it, donated by various persons. The shrine also had lucky charms, which we could buy and place there wishing for good luck and wellbeing.

The Dinner was arranged at an Indian restaurant, and we continued our journey to the Hotel Emion after enjoying the meal.



Day 3

16th April was the third day of our program. After a nice breakfast at the usual venue, we left the hotel at 8.10 am to visit the Cyberdyne studio in the Ibaraki prefecture.

THE CYBERDYNE STUDIO

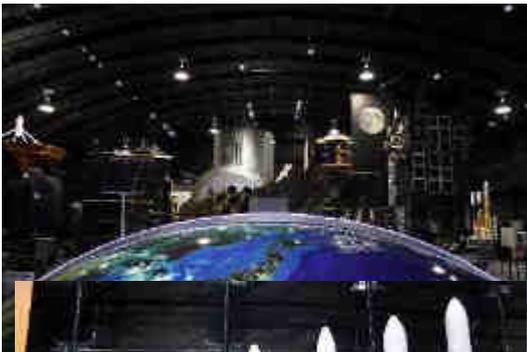
CYBERDYNE STUDIO is the facility where people can get in touch with the most advanced robotic technologies. Cyberdyne Inc. was established in June 2004 to disseminate the research results of professor Yoshiyuki Sankai of university of Tsukuba, for the benefit of public. Cyberdyne Inc. not only materializing technology for practical use but also builds up strong research and development system to hear authentic voices of end users and makes a further leap. Consequently, Cyberdyne Inc. will launch creative HAL - (Hybrid Assistive Limb) is the world's first cyborg-type robot by while a wearer's bodily functions can be improved, supported and enhanced. Their first robots HAL 1 and 2 were developed, and they were wired, connected to the computer. But the robots HAL 3 and onwards were developed as wireless robots. HAL assists a physically challenged person to move and enables him or her to exert bigger motor energy than usual.

In addition, we were escorted to a 270° seamless screen named “omnivision” where we were shown a video clip of their future products and their capabilities. In the same venue, two HAL robotic limbs were allowed for interaction with the audience, where Vietnamese students were also present along with us. There, the HAL robotic limbs were programmed to be controlled with the bioelectric signals present on the surface of the skin, which are generated by the voluntary contractions of voluntary muscles.



JAXA

As we had a tight schedule, we had to have our lunch on the bus in boxes, on our way to JAXA (Japanese Aerospace Exploration Agency). We were registered as visitors at the JAXA, and then escorted on a guided tour around JAXA. First, we visited the Isolation chamber, where astronauts were trained beforehand. There, conditions of the space are created artificially, and astronauts are trained to deal with diverse situations that may arise when in the space. For example, astronauts are trained how to act in an emergency in the hyperbolic chamber. Secondly, we were guided to the mission control room, where an introductory video was shown. Thirdly, we had a self-guided tour at the exhibition hall where we could observe the models of the great innovations of JAXA.



Day 4

Our fourth day was a special day as we were going to have an amazing time with Japanese high school students. Our students were so excited. We also had chance to exchange our ideas and experiences of education system in our country with the Bangladesh supervisors. We had the breakfast by 7.30am and departed to the Shibuya Junior and Senior High School. The Shibuya area and its crossing are said to be popular destinations among young people. The students and the teachers of the school warmly welcomed all of us. Four greeting remarks were done by a student representing each of their countries, and our student, Chathuni had the privilege to greet the gathering on behalf of all of 10 students.



First, the students were given an introductory session and divided into several groups. Each group consisted of three Japanese students and two foreign students. We had a visit around their school in groups. Then, an interactive competition was arranged among the groups, and then we had lunch with them. Afterwards, a recreational event was organized by the Shibuya High School students. We could enjoy Japanese traditional songs and dances there, all performed by the high school students. The winning teams of the competitions were announced, and we were proud to have two Sri Lankans among them. Pasindu, was a member of the team 10, which won the third place in “paper tower” making competition, and Chathuni was a member of team 9, which had scored the third highest marks in the Multiple-Choice Question session.

Next event was the most significant event of the day. We could listen to a lecture by a Japanese Nobel Laureate who won the Nobel prize for chemistry in 2001. At the end, there was a questioning session, and we also posed a question as a team. Nirasha, put forward the question on behalf of us. Prof. Noyori answered all the questions, and it was a nice discussion at the end. After a photographic session, we all headed for dinner. We had a nice meal at an Indian restaurant and returned to the accommodation.

Day 5

The start of the day 5 was marked by the wake-up call at 6.30 am. We had a plenty of free time that day, so we enjoyed our breakfast leisurely and left the hotel to the Miraikan – the national museum of emerging science and innovation.

MIRAIKAN

The "Miraikan", which literally means “the Future, “is a science museum encompassing future science, technology and innovations of all kinds. Its tasks are; Raising general awareness of cutting-edge science and technology and developing the methods of expression and communication to present them, Training Science Communicators internally and externally through a unique development system based on practical science communication activities, Strengthening the network including researchers/engineers, media, volunteers, Member's

Club, museum visitors, government offices, schools, science museums in Japan and around the world, and industries and engaging in the projects and the activities with them to create a link between cutting-edge science and technology and the general public. The slogan "Open Your Eyes to Science: See a Whole New World" expresses the stance of Miraikan. This slogan encompasses Miraikan's aim to share the state-of-the-art knowledge and innovation to achieve a future society guided by wisdom and understanding.

Museum, we met the first astronaut from Japan, Dr. Mamoru Mori who is the director of the Miraikan. He gave us an inspiring speech, followed by a Q and A session. There, our team member Mithun Samaranayake answered a question posed by the director precisely, earning appreciation from all. It was followed by a photographic session with the professor.

The most impressive attraction in the museum was the performance by ASIMO, which was an autonomic robot who could kick, sing, dance and display smooth movements. It was developed by the HONDA company, and gathered attraction of all.

Next, we moved to Mumbai restaurant in Odaiba, for lunch. As we had a little spare time after lunch, so we had quite a walk around. Our next destination was the SAITAMA University.

SAITAMA UNIVERITY

SAITAMA University is a place where many international students study in. We were accompanied to the university by our coordinators. At first, we were given a lecture by a professor, followed by another lecture regarding the wastewater management in developing countries. The lecture included information of a few projects conducted in Sri Lanka as well.

Next, we were given an opportunity to have a discussion with current Sri Lankan students of the SAITAMA University from various areas of study. We met 5 Sri Lankan students with whom we were given an opportunity to have a chat with. We shared our thoughts about the Japanese culture, Japanese society as well as about the academic future. Meanwhile, we had a nice light snack. Then we left the university and headed for dinner at an Indian restaurant.



Day 6

The sixth day was the last day of the Sakura Science Program. The wake-up call was at 5.45 am, and then we enjoyed our last breakfast at the hotel. Our next destination was the Shibaura institute of technology. All the participants who took part in this program joined together.

SHIBAURA INSTITUTE OF TECHNOLOGY (SIT)

SIT aims to foster scientists and engineers who can contribute to the sustainable growth of the world by exposing our students to culturally diverse environments where they learn to cope with, collaborate with, and have ever-lasting friendships with fellow students from around the world.

Several professors representing various parts of the world welcomed all the SSP participants warmly. Among them were professor Chinthaka, who is a Sri Lankan scientist. All of them explained about the opportunities provided by the university for international students to pursue undergraduate as well as post graduate studies. In addition, an invitee from the ministry of education explained about the available scholarship and study opportunities in Japan. Next, we were given a guided tour around the campus by some students studying at SIT. First, we were grouped into 10 groups, with two guides for each group. In the end, we had our lunch together. It was also a great opportunity to have pictures and exchange souvenirs with other foreign students and supervisors.



FAREWELL PARTY AND CULTURAL EVENT

Finally, marking the end of the program, we went to the JST (Japanese Science and Technology agency) office, to take part in the farewell party. All the participants; students, supervisors and coordinators were present at the venue. First, a reporting session was held, where one student from each team presented their experiences throughout the program to the gathering. It was followed by congratulatory remarks by officials representing JST, JICE and members from respective embassies of the four countries. Then after a quick break, cultural items from all the four participant countries were presented, in the alphabetical order. We, receiving the third chance, performed a dance act to the song “Mango-Kalu Nande”, a song by Annesly Malewana. At the end, we all had a photography session with other students, supervisors and officials, before the crowd scattered.

During the period of seven days we spent, we could experience the Japanese culture, filled with rich traditions based on mutual respect and simplicity. People had a pleasant smile on their faces for us, always. The best lesson we took from them was, not to waste anything, time, money or trash! They have excelled making use of “everything” they have got. As a country lacking natural resources, they practice recycling and making use of waste to its best. We should observe their practices and initiate utilization of the resources we have got, with maximum efficiency.

Also, the respect they show towards the taboos and customs of the Japanese society, binds all its members together, as a united nation. Their commitment and dedication towards the specific task they perform has played a major role in the development of their country economically.

In conclusion, we could experience for ourselves that the attitude of people has a greater contribution towards the success of a task, while being among the Japanese. With the marvelous constructions and technology in Japan, Japanese people express that nothing is impossible if there is courage and a sharp target. After this valuable journey to Japan, I promised myself to apply the good things obtained from Japanese people to change even a little bit of the society



