

SAKURA SCIENCE Exchange Program

SAKURA SCIENCE High School Program

Activity Report 2019

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About the Sakura Science Plan

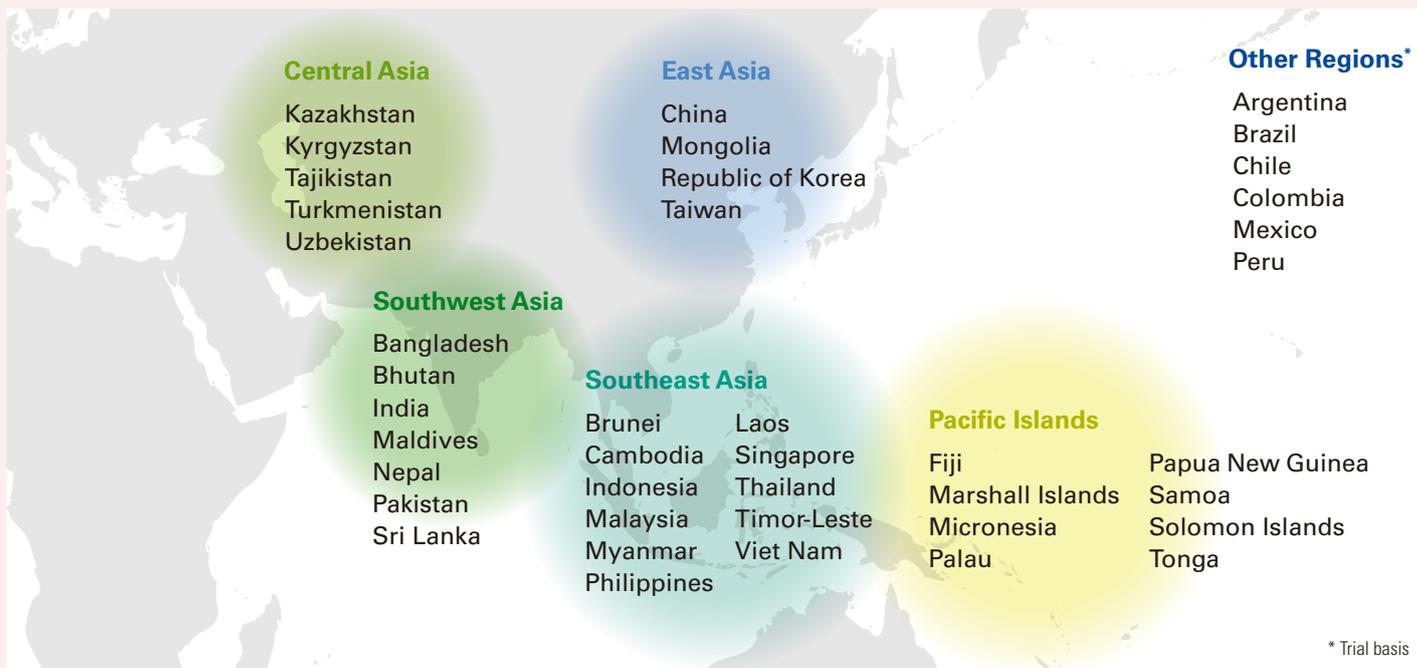
The Sakura Science Plan is a program that invites youth from Asian and other countries to Japan so that they can experience firsthand Japanese culture, science and technology. Beginning in 2014, and for a period of six years, more than 30,000 promising young people have visited Japan on this program.

By exchanging ideas in the fields of science and technology among the participants of the Sakura Science Plan, the program aims to contribute to the following:

- Support the development of talented people overseas who have the potential to contribute to innovation in science and technology, and support continuous interaction between Japan and other countries and regions
- Promote globalization of Japanese education and research institutes
- Strengthen good relationships between Japan and other countries and regions

Eligibility Criteria for the Sakura Science Plan

Students, researchers and others engaged in science and technology who are 40 years old or younger from the following 41 countries and regions:



Two Programs of the Sakura Science Plan

The following two programs have been prepared by the Sakura Science Plan.

Programs	Features	How to Apply	Invitation Period
Open Application Program	JST supports the necessary expenses for the programs selected as Open Application Program.	Overseas and Japanese organizations jointly plan the program, and the Japanese organization sends applications to JST within the designated period.	Seven days to three weeks
JST Direct Invitation Program	JST plans the programs and implements the programs as a host organization. There are two types: SAKURA SCIENCE High School Program and SAKURA SCIENCE Supporters Program.	Not open for public application	Seven days

About the SAKURA SCIENCE High School Program

SAKURA SCIENCE High School Program (SSHP) started as part of the Sakura Science Plan to invite youth from 14 countries and regions in 2014.

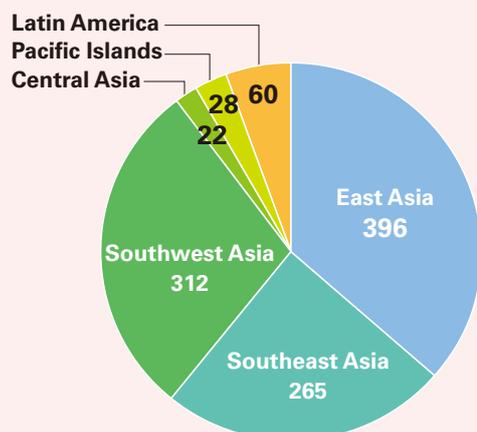
The SSHP, which JST plans and implements as a host organization, invites promising high school students, as well as supervisors, from Asia and elsewhere to Japan to participate in an exchange program. The students take part in special classes taught by top scientists in Japan (including Nobel laureates), visit prominent universities and research facilities, interact with Japanese high school students and experience Japanese culture. The program aims to enhance the visiting high school students' interest in science and technology in Japan, and to further their talents as global human resources that are required by Japan's universities, research institutions and companies. In doing so, the program seeks to contribute to the development of science and technology globally.

SSHP in FY2019

In FY2019, the SSHP invited a total of 1,083 outstanding high school students and supervisors to Japan from 39 countries and regions in Asia, the Pacific Islands and other regions (six Latin America countries). The students were divided into 10 groups and participated in specially planned and diverse programs over the course of seven days and six nights over the period of early April 2019 until early December 2019.

Visiting Japan for the first time, the participating students encountered advanced science and technology that fully engaged their curiosity, before returning to their home countries. In a post-participation questionnaire, approximately 97% of the high school students responded that they hope to return to Japan, creating expectations that the students will act as bridges between their countries and Japan in the future.

Number of Participants by Area



Number of Participants by Country and Region in FY2019

Area	Country/Region	Students	Supervisors	Total
East Asia	China	284	29	313
	Republic of Korea	30	6	36
	Taiwan	30	5	35
	Mongolia	10	2	12
Southeast Asia	Indonesia	39	8	47
	Malaysia	30	5	35
	Myanmar	30	5	35
	Philippines	30	5	35
	Thailand	30	5	35
	Viet Nam	30	5	35
	Cambodia	10	2	12
	Laos	10	2	12
	Singapore	10	2	12
	Brunei	5	2	7
Southwest Asia	India	210	34	244
	Pakistan	15	3	18
	Bangladesh	15	3	18
	Sri Lanka	10	2	12
	Nepal	10	2	12
	Bhutan	3	1	4
	Maldives	3	1	4
Central Asia	Uzbekistan	5	1	6
	Kazakhstan	3	1	4
	Kyrgyzstan	3	1	4
	Tajikistan	3	1	4
	Turkmenistan	3	1	4
Pacific Islands	Fiji	3	1	4
	Samoa	3	1	4
	Marshall Islands	3	1	4
	Micronesia	3	1	4
	Papua New Guinea	3	1	4
	Palau	3	1	4
	Tonga	3	1	4
Latin America	Brazil	10	2	12
	Colombia	10	2	12
	Mexico	10	2	12
	Peru	10	2	12
	Argentina	5	1	6
	Chile	5	1	6
Total		932	151	1,083



High school students who visited Japan on the SSHP made a courtesy call on Ueno Michiko, State Minister of Education, Culture, Sports, Science and Technology

Representatives (6 high school students, and 5 supervisors) of the tenth group of the SSHP for FY2019 from each country (Argentina, Chile, China, Peru and Uzbekistan) that arrived in Japan on December 1 (Sunday) visited the Ministry of Education, Culture, Sports, Science and Technology (MEXT) on December 6 (Friday) to pay a courtesy call on Ueno Michiko, State Minister of Education, Culture, Sports, Science and Technology.



The high school students appeared to be slightly nervous, but State Minister Ueno warmly shook each student's hand and welcomed them into her office. There, she received a bouquet of flowers from the students.

Initially in the meeting, State Minister Ueno kindly asked the students about the impressions of the program and of Japan. They asked her for advice regarding becoming a foreign student in Japan, and about her work. State Minister Ueno responded warmly and politely to each of the questions. From beginning to end, the conversation moved along in a peaceful mood.

Lastly, State Minister Ueno offered words of encouragement to the high school students. All the students seemed to hang on her every word. The time ended all too quickly, and finally the State Minister shook each student's hand and left the meeting.



Group 1

Sun, April 14 – Sat, April 20, 2019

Country/Region	Students	Supervisors	Total
Bangladesh	15	3	18
India	47	7	54
Sri Lanka	10	2	12
Viet Nam	30	5	35
Total	102	17	119

Date	Sri Lanka and Viet Nam	India and Bangladesh
April 14 (Sun)	Arrival in Japan; orientation	
April 15 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura	
April 16 (Tue)	Visit to CYBERDYNE STUDIO and JAXA	Visit to the University of Tsukuba (University introduction, interaction with students) and JAXA
April 17 (Wed)	Visit to Shibuya Junior & Senior High School (Special lecture by Professor Noyori Ryoji, interaction with high school students)	
April 18 (Thu)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru) Visit to Saitama University (Campus tour)	Tour of the Disaster Prevention Experience-learning Facility "Sona Area Tokyo"
April 19 (Fri)	Visit to Shibaura Institute of Technology (Campus tour, interaction with students) Closing ceremony and farewell ceremony	
April 20 (Sat)	Departure from Japan	

Tour of CYBERDYNE STUDIO

April 16

Students experienced the robot suit called HAL at CYBERDYNE STUDIO, where they were exposed to leading-edge robot technology. HAL is the world's first robot that reads imperceptible biological signals from our extremities, which are emitted from the wearer's brain to assist in movement. The students were extremely excited to be able to actually wear the sensors on their arms for a real trial.



When you wear the sensors and move your arms, HAL responds in the same way.

Visit to Shibuya Junior & Senior High School

April 17

Students were separated into smaller groups and joined the school tour, after which they participated in the "newspaper tower game." In this game, 10 sheets of newspaper are used. The team that is able to build the tallest tower wins. The members who had become familiar with each other during the school tour actively put their ideas together and tried hard as a team to build the tallest tower than the others.



Taking on the newspaper tower game

Special Lecture by Professor Noyori Ryoji

April 17

Students participated in a special lecture at Shibuya Junior & Senior High School by Professor Noyori, the Nobel laureate in Chemistry in 2001. Professor Noyori talked about interesting stories including how his interest in science originated from when he was small and learned that rayon is made from coal, water and air, and how he was inspired by the Nobel Prize of Dr. Yukawa Hideki to become a scientist.



Professor Noyori speaking to students

Visit to Saitama University

April 18

The students were given a lecture by Professor Kawamoto Ken, who is involved in joint research with Viet Nam in the Science and Technology Research Partnership for Sustainable Development (SATREPS). The lecture was with regard to appropriate control of construction waste materials, recycling and protection of the environment in Asia. The discussion conducted with the foreign students not only covered research topics but also involved coming up with a life plan and advice regarding scholarships.



Exchanging opinions with the foreign students from their home country

Group 2

Sun, April 20 – Fri, April 26, 2019

Country/Region	Students	Supervisors	Total
Bhutan	3	1	4
India	57	10	67
Indonesia	19	4	23
Marshall Islands	3	1	4
Mexico	10	2	12
Micronesia	3	1	4
Total	95	19	114

Date	Indonesia, Marshall Islands and Micronesia	India	Mexico	Bhutan
April 20 (Sat)	Arrival in Japan; orientation			
April 21 (Sun)	Tour of National Museum of Emerging Science and Innovation			
	Tour of the Disaster Prevention Experience-learning Facility "Sona Area Tokyo"	Tour of Panasonic Center Tokyo, visit the Indian Embassy	Tour of Sony ExploraScience	
April 22 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura			
April 23 (Tue)	Visit to Tokyo University of Marine Science and Technology	(India A+Mexico) Visit to National Institute of Technology, Kisarazu College Visit to Salesian Polytechnic		(India B+Bhutan)
	Visit to Senior High School at Sakado, University Tsukuba (Special lecture by Professor Ohsumi Yoshinori, interaction with high school students)			
April 24 (Wed)	Visit to Kanagawa Prefectural Atsugi High School (Interaction with high school students)			
April 25 (Thu)	Closing ceremony and farewell ceremony			
April 26 (Fri)	Departure from Japan			

Courtesy Call to the Ambassador of India in Japan April 21

The high school students who were visiting from India were allowed to visit the Indian embassy in Japan and pay a courtesy call on the Indian ambassador, Sanjay Kumar Verma. The ambassador kindly encouraged the students to “not only gain exposure to the leading technologies where they were touring but also to learn about the behind-the-scenes processes, and to become aware that science and engineering were being developed for society and the end user.”



Ambassador Verma encouraging Indian high school students

Visit to Tokyo University of Marine Science and Technology April 23

Tokyo University of Marine Science and Technology is the only national university in Japan that conducts training and research in the field of marine science. After the high school students were given a lecture on “the status of Japan’s hatchery fish” by Professor Shuichi Sato, they toured the research room. Research of the ocean is a field of deep interest to those high school students who live in Pacific Islands surrounded by an ocean like Japan.



Commemorative photograph in front of skeleton of world's largest whale

Special Lecture by Professor Ohsumi Yoshinori April 23

The high school students were given a special lecture by Professor Ohsumi, who was given a Nobel Prize in physiology and medicine for his research in “clarifying the system of autophagy (cell autophagy).” Professor Ohsumi explained autophagy in a way that was easy for the high school students to understand, and encouraged them by saying “find what you are interested in and move forward to attain it.”



Professor Ohsumi speaking to students

Visit to Kanagawa Prefectural Atsugi high School April 24

After the school tour, the students were separated into three groups. After allowing the students to introduce their own countries in a “presentation and discussion” session, they talked in pairs, and had an enjoyable time trying their hand at origami and *sugoroku* in the Japanese culture experience session. In the science experiment, the students used a pump to decompress a laboratory container and observed a variety of objects placed inside the container before and after decompression.



Students observing what happened inside the container after it is decompressed

Group 3

Sun, May 19 – Sat, May 25, 2019

Country/Region	Students	Supervisors	Total
Cambodia	10	2	12
India	42	7	49
Laos	10	2	12
Mongolia	10	2	12
Philippines	30	5	35
Total	102	18	120

Date	
May 19 (Sun)	Arrival in Japan; orientation
May 20 (Mon)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru) Visit to Tokai University Takanawadai Senior High School (Interaction with high school students)
May 21 (Tue)	Tour of Edo-Tokyo Museum Travel to Nagoya City by bullet train; tour of Toyota Commemorative Museum of Industry and Technology
May 22 (Wed)	Tour of GIFU-KAKAMIGAHARA AIR AND SPACE MUSEUM Visit to NAGOYA ELECTRIC WORKS CO., LTD.
May 23 (Thu)	Visit to Nagoya University (Special lecture by Professor Amano Hiroshi, interaction with students of Nagoya University Affiliated Upper Secondary School) Travel to Tokyo by bullet train
May 24 (Fri)	Visit to Yokohama National University (Campus tour, interaction with students) Closing ceremony and farewell ceremony
May 25 (Sat)	Departure from Japan

Visit to NAGOYA ELECTRIC WORKS CO., LTD. May 22

The students visited NAGOYA ELECTRIC WORKS, whose core business is Intelligent Transportation Systems (ITS). This company is working with the Indian Institute of Technology on the international joint research program (SATREPS) to help alleviate traffic congestion in Ahmedabad City. The students learned about their research and high-quality manufacturing capabilities. Many students seemed surprised by imaging the scene of doing this kind of work, that directly links themselves to the path they want to take in the future, and that they would like to come and study in Japan.



Group commemorative photograph, everyone was moved by the bright and harmonious company atmosphere

Special Lecture by Professor Amano Hiroshi May 23

At the Higashiyama Campus of Nagoya University, Professor Amano, the Nobel laureate in Physics in 2014 and also the Director of the Center for Integrated Research of Future Electronics at Nagoya University, held a lecture for high school students. He spoke on why he chose blue light-emitting diodes as his research theme, and how he now devotes himself to research on electric cars with enhanced energy efficiency. The students in attendance looked focused on the lecture.



Questions and answers with Professor Amano

Interaction with Students of Nagoya University Affiliated Upper Secondary School May 23

The students visited Nagoya University and were given an overview of the university and explanation of the information necessary for studying abroad. The students were allowed some time to interact with the students at Nagoya University Affiliated Upper Secondary School. In the afternoon they split into groups and went on a campus tour. The students visited the Disaster Mitigation Research Building, the Nobel Prize Exhibition Room, Nagoya University Museum, and Newton's Apple Tree (a tree grafted from the home of Sir Isaac Newton).



The high school students interacting in a lunchtime game

Visit to Yokohama National University May 24

The Yokohama National University campus is full of greenery and extremely beautiful. As soon as the high school students arrived, out came their smartphones for mass photo taking. Of the approximately 10,000 students at Yokohama University (including the graduate college), students from abroad make up 10%. It has an international feel, and there are scholarships and dormitories for foreign students. So, all of the students who heard that expressed great interest.



The students on a campus tour with university students from their home country

Group 4

Sun, May 26 – Sat, June 1, 2019

Country/Region	Students	Supervisors	Total
India	30	5	35
Myanmar	30	5	35
Papua New Guinea	3	1	4
Samoa	3	1	4
Taiwan	30	5	35
Tonga	3	1	4
Total	99	18	117

Date	Taiwan	India	Myanmar	Papua New Guinea, Samoa and Tonga
May 26 (Sun)	Arrival in Japan; orientation			
May 27 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura			
May 28 (Tue)	Tour of JAXA Tsukuba Space Center Visit to University of Tsukuba		Tour of the JAL Factory	Tour of Kawasaki Eco Gurashi Mirai-kan
May 29 (Wed)	Visit to Chiba Prefectural Funabashi High School (Special lecture by Professor Kajita Takaaki, interaction with high school students)			
May 30 (Thu)	Visit to National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru)			
	Tour of Daichi Sankyo Kusuri Museum	Tour of The Railway Museum (Omiya)	Tour of Nissan Motor Company Yokohama Plant	
May 31 (Fri)	Visit to Tokyo City University Setagaya Campus (Campus tour, interaction with students) Closing ceremony and farewell ceremony			
June 1 (Sat)	Departure from Japan			

Tour of JAXA Tsukuba Space Center

May 28

At JAXA, the students learned by video about the history of developments made thus far, and were given an overview of the facility, then they were taken on a tour of the facilities. The students were given a chance to look up close at the “closed environment practical training equipment” that appeared in the movie “Space Brothers,” and is used in selection testing of astronauts, and the operation control room of the space station *Kibo*. The students showed great excitement and took a great many photographs.



Touring an actual size model for the Space Station Kibo, at the Japan Testing Building

Visit to the University of Tsukuba

May 28

After the students were given an overview of the University of Tsukuba, which has welcomed many foreign students from all around the world, they got together with the foreign students and exchanged information on campus life, their background to becoming a foreign student and what kinds of procedures they need to implement to become a foreign student. Also, they were allowed to tour the next-generation, multi-compound computing acceleration supercomputer Cygnus, which has only just begun operations in April 2019.



Exchanging information with foreign students from all around the world

Visit to Chiba Prefectural Funabashi High School

May 29

In the poster session, the students gave presentations on the content that they prepared according to subjects they were given in advance. There was a broad variety of subjects ranging, from genetic modification to environmental problems, robots, and flying drones. There was even a high school student from Taiwan who gave a presentation on flying with bubbles, who got his inspiration from the animated film *Laputa: Castle in the Sky*.



High school student from Papua New Guinea giving presentation

Special Class by Professor Kajita Takaaki

May 29

The students attended a special class by Professor Kajita, the Nobel laureate in Physics in 2015. Professor Kajita spoke to students about how he quit as captain of the archery club in university and decided to go into physics because of his interest in the subject. Later, he explained how it was his meeting Professor Koshiba Masatoshi that moved him to do research into neutrinos.



Professor Kajita speaking to the students

Group 5

Sun, June 9 – Sat, June 15, 2019

Country/Region	Students	Supervisors	Total
Brunei	5	2	7
China	30	3	33
India	16	2	18
Thailand	30	5	35
Total	81	12	93

Date	China and India	India and Brunei	Thailand
June 9 (Sun)	Arrival in Japan; orientation		
June 10 (Mon)	Visit to Saitama Prefectural Urawa High School	Visit to Rikkyo University (Campus tour, experiment lab with Professor Shirakawa)	
June 11 (Tue)	Visit to RIKEN Visit to Edo-Tokyo Museum and Senso-ji		
June 12 (Wed)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru)		
	Tour of Nissan Motor Company Yokohama Plant (China)	Tour of the JAL Factory	Tour of JAMSTEC Yokosuka Headquarters
June 13 (Thu)	Visit to Rikkyo University (Campus tour, experiment lab with Professor Shirakawa)	Visit to Senior High School at Sakado, University of Tsukuba (Project studies, soil experiment, exchanges)	
June 14 (Fri)	Visit to Keio University Shonan Fujisawa Campus (University introduction, student exchange) Closing ceremony and farewell ceremony		
June 15 (Sat)	Departure from Japan		

Visit to Saitama Prefectural Urawa High School June 10

Forty-five students from China and India visited Urawa High School. They were separated into four groups, and each toured classes for geography, mathematics, English and physics, and were allowed to participate in the classes. Students were able to speak freely in small groups in English about their own countries during the English class. Soon, despite the enjoyable atmosphere, it became lunchtime, so the students were able to deepen their communication around their *obento*.



In the mathematics class

Visit to RIKEN June 11

The students toured the state-of-the-art accelerator facility. The facility is able to generate about 4,000 types of unstable atomic nuclei (radioactive isotopes (RII)), for all elements from hydrogen to uranium, in the form of the most powerful beams in the world. This is the 113th element called Nihonium, recognized by international organizations as the first element to be discovered in Asia. It was discovered by this facility. The students were treated to an explanation into the episode that led to the discovery of Nihonium.



High school students photographing the giant nuclear chart created using Lego blocks

Visit to Senior High School at Sakado, University of Tsukuba June 13

Principal Tamura Kenji is also a professor at the University of Tsukuba. His field is soil science. On that day, Principal Tamura dug a hole for the class in the school ground in the morning. He taught the students about how to identify soils in the class. His class followed the schools educational philosophy of placing importance on practice. All of the students were able to confirm with actual experience that soils differ in hardness and color.



Class on soil science by Principal Tamura

Visit to Keio University Shonan Fujisawa Campus June 14

The students learned during an overview of the university that Fukuzawa Yukichi, who was the founder of Keio University, is the man whose face appears on the ¥10,000 note in Japanese currency. This got their immediate interest. Also, they were given a detailed explanation on the GIGA program, in which students can earn credits required for graduation by taking classes that are conducted in English. Lastly, Associate Professor Hasebe Youko from the Faculty of Environment and Information Studies gave instruction in which students had an interaction session, and deepened their debate in groups.



Casual group discussion on the floor

Group 6

Sun, June 16 – Sat, June 22, 2019

Country/Region	Students	Supervisors	Total
China	29	3	32
Republic of Korea	10	2	12
Malaysia	30	5	35
Singapore	10	2	12
Total	79	12	91

Date	China and Singapore	Malaysia and Republic of Korea
June 16 (Sun)	Arrival in Japan; orientation	
June 17 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura	Visit to Rikkyo University (Campus tour, experiment lab with Professor Shirakawa Hideki)
June 18 (Tue)	Visit to Saitama Municipal Omiya Kita High School (Interaction with high school students)	
June 19 (Wed)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru) Tour of Edo-Tokyo Museum	
June 20 (Thu)	Visit to Rikkyo University (Campus tour, experiment lab with Professor Shirakawa Hideki)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura
June 21 (Fri)	Visit to the University of Tokyo (University introduction, campus tour) Closing ceremony and farewell ceremony	
June 22 (Sat)	Departure from Japan	

Visit to JAMSTEC Yokosuka Headquarters June 17

Students toured the maintenance facility of the deep sea cruising autonomous underwater vehicle (AUV) "URASHIMA" and a hyperbaric chamber facility where deep sea conditions can be reproduced. Also, at the Ocean Science and Technology Museum, a life-size model of SHINKAI 6500, a manned diving survey boat and the pride of Japan is on display. Students, one at a time, were allowed to enter the cockpit and have a chance to move the manipulator that is used to pick up actual organisms and rocks.



In front of the life-size model of SHINKAI 6500

Visit to Saitama Municipal Omiya Kita High School June 18

Students broke into smaller groups where they introduced themselves and became more familiar with each other. Later, they participated in a program for designing a vehicle that moves with the motive force of a balloon or rubber or the like. The students all put their ideas together to come up with a vehicle design. Lastly, they held races, each team racing a vehicle of their own proud design. From qualifying to the final, 1st, 2nd and 3rd place teams were awarded.



Each group giving their own design ideas

Visit to Rikkyo University June 20

Soon after arrival, the students were given a detailed overview of the university, then went on a campus tour with university students. Students often stopped to take photos of the beautiful ivy-covered campus, such as research labs, the library, and various cafeterias. The students got a small taste of university life, and some stated they would like to study at Rikkyo University in the future.



Touring the campus lead by current university students

Experiment Lab with Professor Shirakawa Hideki June 20

Students participated in an experiment lab by Professor Shirakawa, the Nobel laureate in Chemistry in 2000. This was the opportunity that the high school students were waiting for. They all listened intently and a little excitedly to his lecture. The theme was "Let's create an EL element by synthesizing conductive plastic." Professor Shirakawa kindly explained the experiment. When lastly the element emit light, the students were excited and delighted together with the university students who supported the experiment.



Commemorative photograph with Professor Shirakawa after the experiment

Group 7

Sun, July 7 – Sat, July 13, 2019

Country/Region	Students	Supervisors	Total
China	50	5	55
Fiji	3	1	4
Indonesia	20	4	24
Republic of Korea	20	4	24
Maldives	3	1	4
Palau	3	1	4
Total	99	16	115

Date	China	Republic of Korea	Fiji, Indonesia, Maldives and Palau
July 7 (Sun)	Arrival in Japan; orientation		
July 8 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura		
July 9 (Tue)	Visit to JAXA and Ibaraki Prefectural Namiki Secondary School (Exchanges)	Visit to Tokyo University of Marine Science and Technology Visit to National Astronomical Observatory of Japan (NAOJ)	Tour of the Disaster Prevention Experience-learning Facility "Sona Area Tokyo"
July 10 (Wed)	Visit to Tokyo University of Science (University introduction, mathematics class by Professor Akiyama Jin)	Visit to Saitama Prefectural Koshigaya Kita High School (Special lecture by Professor Fujishima Akira, interaction with high school students)	
July 11 (Thu)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru) Tour of Daichi Sankyo Kusuri Museum	Tour of JAXA Chofu Aerospace Center	Tour of Sony ExploraScience
July 12 (Fri)	Visit to Yokohama City University Kanazawa-Hakkei Campus (Campus tour, interaction with students) Closing ceremony and farewell ceremony		
July 13 (Sat)	Departure from Japan		

Visit to Ibaraki Prefectural Namiki Secondary School

July 9

Fifty-five high school students from China visited this school. At the welcoming party, third-year students of the school performed a wonderful choral recital and offered a karate performance to great applause. The Chinese students also introduced some of the beautiful sights and culture of their home country to students at Namiki Secondary School. As they became more familiar with each other, they tried their skill of making origami in the classroom and spoke freely about their dreams.



A student wearing traditional Japanese kimono taught the other students the art of origami.

Visit to Saitama Prefectural Koshigaya Kita High School

July 10

Students were seated next to one another at the venue for the opening ceremony, and were given time to interact that began with some awkward self-introductions. However, students soon became familiar with each other and we began to see smiling faces and a lively time was had by all. In the afternoon, the students got to experience facets of Japanese culture, including *shodo* and flower arrangement, and later they were able further to deepen their bonds by participating in club activities for science, including physics, chemistry and biology.



The students quickly broke down barriers during their time to interact.

Meeting with Director Mohri Mamoru at the National Museum of Emerging Science and Innovation

July 11

Director Mohri of the National Museum of Emerging Science and Innovation, the first Japanese astronaut, welcomed the students. The students were honored to hear a talk by Director Mohri into the background to his wanting to become an astronaut, the activities he undertook in space and the earth seen from space, all accompanied by photos. The students actively raised their hands to ask him questions. We could see that he was quite stimulated by the great interest shown by the students.



Group commemorative photograph with Director Mohri

Visit to Yokohama City University

July 12

After the students arrived at the university, they were seated in groups. Once joined by foreign students studying at the university, they left for a campus tour. The students toured the campus, where you can feel a refreshing sea breeze. Later, they were given an explanation of research subjects presently being studied at the research rooms. Lastly, the students listened to an explanation of studying abroad in Japan given by Japan Student Services Organization (JASSO).



Interaction with current university students

Group 8

Sun, July 14 – Sat, July 20, 2019

Country/Region	Students	Supervisors	Total
China	60	6	66
Kazakhstan	3	1	4
Nepal	10	2	12
Pakistan	15	3	18
Turkmenistan	3	1	4
Total	91	13	104

Date	China	Pakistan, Nepal, Kazakhstan and Turkmenistan
July 14 (Sun)	Arrival in Japan; orientation	
July 15 (Mon)	Tour of Panasonic Center Tokyo Visit to Tokyo Institute of Technology (University introduction, experiment class by Professor Ichimura Tejiro)	Tour of TEPIA Advanced Technology Gallery
July 16 (Tue)	Visit to Chiba Prefectural Kisarazu High School (Interaction with high school students)	
July 17 (Wed)	Visit to High Energy Accelerator Research Organization (KEK) (Special lecture by Nobel laureate Kobayashi Makoto, interaction with students of Meiwa Senior High School)	
July 18 (Thu)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru) Tour of Edo-Tokyo Museum	
July 19 (Fri)	Visit to Chiba University (Campus tour, interaction with students) Closing ceremony and farewell ceremony	
July 20 (Sat)	Departure from Japan	

Experiment Class of Professor Emeritus Ichimura Tejiro at Tokyo Institute of Technology

July 15

Professor Ichimura is known for having invited to Japan the famous Christmas Lectures (Candle Science) that was conducted in 1860 by the renowned English scientist, Michael Faraday. Professor Ichimura had prepared especially for this day an experiment relating to combustion. Lastly, because of the stimulating content of the class, and eagerness shown by the students, everyone enjoyed the class.



Professor Ichimura enthusiastically conducting class

Visit to Chiba Prefectural Kisarazu High School

July 16

At the opening ceremony, the principal representatives from each country and student representatives all gave an introductory greeting, which started off our exchanges. After giving self-introductions and reviewing what they were going to experience in the afternoon, students were separated into four groups and left to tour along with students from the same school. They visited Nippon Steel Corporation, Kimitsu Plant, the Kazusa DNA Research Institute, Umihotaru PA and Kururi Castle.



Communicating by smartphone

Special Lecture by Professor Kobayashi Makoto at High Energy Accelerator Research Organization

July 17

While visiting the wide-open facilities and learning about elementary particles and the accelerator, the students participated in the program with students from Aichi Prefectural Meiwa High School, the school that Professor Kobayashi, the Nobel laureate in Physics in 2008, graduated from. After, they participated in the lecture by Professor Kobayashi as he is also a special professor emeritus of that organization.



Professor Kobayashi speaking to students

Visit to the Pakistan Embassy in Tokyo

July 18

This year, the temporary Deputy Ambassador Ali Anser Zaidi warmly welcomed the students and others. Mr. Zaidi encouraged the high school students from his native country and was eager to hear about the program. After lunch, Mr. Zaidi took the students on a tour of the building. They were allowed an unprecedented look at his office, where all of the students were very interested to take photographs.



Mr. Zaidi then took the students on a tour of the embassy; photos of past ambassadors to Japan adorn the hallway walls

Group 9

Sun, November 24 – Sat, November 30, 2019

Country/Region	Students	Supervisors	Total
Brazil	10	2	12
China	58	6	64
Colombia	10	2	12
India	18	3	21
Kyrgyzstan	3	1	4
Tajikistan	3	1	4
Total	102	15	117

Date	China	Brazil, Colombia, India, Kyrgyzstan and Tajikistan
November 24 (Sun)	Arrival in Japan; orientation	
November 25 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura	
November 26 (Tue)	Visit to Shibaura Institute of Technology Kashiwa Senior High School	Visit to JAXA and the University of Tsukuba
November 27 (Wed)	Visit to Tokyo University of Science (University introduction, tour of Mathematical Experience Plaza, mathematics class by Professor Akiyama Jin)	Visit to Tokyo Metropolitan Koishikawa Secondary Education School (Special lecture by Professor Fujishima Akira, interaction with high school students)
November 28 (Thu)	Tour of TEPIA Advanced Technology Gallery Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru)	Tour of RiSuPia of Panasonic Center Tokyo
November 29 (Fri)	Visit to Tokyo Metropolitan University (Campus tour, interaction with foreign students) Closing ceremony and farewell ceremony	
November 30 (Sat)	Departure from Japan	

Visit to Shibaura Institute of Technology Kashiwa Senior High School November 26

In the afternoon, Japanese and Chinese high school students gave a research presentation they had prepared. Students from the same school put up posters while the Chinese students used PowerPoint to give their presentations. Every subject was full of interesting content that delved deeply into the theme including local history, their food culture, novels, and social phenomena and the like. It appears to have led to mutual understanding of each other's culture.



The students began interacting after they gave their self-introductions.

Visit to Tokyo Metropolitan Koishikawa Secondary Education School November 27

At the welcome party, the students were introduced to a history of the school, which is having its centennial anniversary, and to its educational policies. After that, the students were separated into groups and they listened carefully to research presentations given by students of that school. Each presentation had its own unique perspective. You could see that the students always worked hard on research. In the afternoon, the students were allowed to participate in classes such as math puzzles and crafts during the experience learning session.



High school students talking about their home country (China)

Mathematics Class of Professor Akiyama Jin at Tokyo University of Science November 27

Professor Akiyama is renowned as a mathematician who teaches the appeal of mathematics in an easy-to-understand and interesting manner. In his class called "Math spectacle show," he explained various mathematical theories using one prop after another. The high school students were captivated by the fun of mathematics he imparted in a class that evolved almost like magic.



Professor Akiyama using his own handmade props

Visit to Tokyo Metropolitan University November 29

The high school students visited the Research Center for Gold Chemistry at the Tokyo Metropolitan University. The center, established for the purpose of "pioneering new gold chemistry," is well-known worldwide as a gold chemistry research center. The students toured the facility after hearing about new gold chemistry that is expected to be applied for gold catalysis and medical diagnostics and treatment. They then visited other labs with university students.



During the tour

Group 10

Sun, December 1 – Sat, December 7, 2019

Country/Region	Students	Supervisors	Total
Argentina	5	1	6
Chile	5	1	6
China	57	6	63
Peru	10	2	12
Uzbekistan	5	1	6
Total	82	11	93

Date	China	Chile, Peru, Argentina and Uzbekistan
December 1 (Sun)	Arrival in Japan; orientation	
December 2 (Mon)	Visit to JAMSTEC Yokosuka Headquarters; tour of Kamakura	
December 3 (Tue)	Visit to JAXA and University of Tokyo Kashiwa Campus	
December 4 (Wed)	Visit to Eiko Gakuen (Special lecture by Professor Fujishima Akira, interaction with high school students)	
December 5 (Thu)	Tour of National Museum of Emerging Science and Innovation (Including a lecture by Director Mohri Mamoru)	
	Tour of Nissan Motor Company Yokohama Plant	Visit to Kazusa DNA Research Institute
December 6 (Fri)	Visit to Chuo University (University Introduction, Labo Tour, interaction with foreign students) Representative from each country: Courtesy call to Ueno Michiko, Deputy Minister of Education, Culture, Sports, Science and Technology Closing ceremony and farewell ceremony	
December 7 (Sat)	Departure from Japan	

Visit to University of Tokyo Kashiwa Campus

December 3

After arriving at the campus, the students first attended a lecture on squid ecology. Then, they were given a tour of the Institute for Cosmic Ray Research, the Graduate School of Frontier Sciences and the Center for Spatial Information Science. The high school students demonstrated their intense interest in each of the research buildings. They also asked researchers many questions, so the tour went well beyond what we originally had planned.



Listening to an explanation of a system to detect light using a CTA camera

Visit to Eiko Gakuen Senior High School

December 4

The theme for this day was the Sustainable Development Goals (SDGs). The students eagerly discussed one of the 17 goals in their individual groups. The situation is different for each country. Comments were wide and various, but the students were able to summarize their conclusions and give a presentation in the afternoon on the result of their discussions. There were teams who received applause after their presentation. It was a very fulfilling discussion.



Chinese students listening intently

Special Lecture by Professor Fujishima Akira

December 4

The students attended a special class given by Professor Fujishima (Professor Emeritus, Tokyo University of Science, and Recipient of the Order of Culture) at Eiko Gakuen. More than 50 years ago, Professor Fujishima discovered photocatalyst technology. He spoke about how, now, there are many examples of its use all over the world, from surgery theater walls to the outer walls of homes, air purifiers and even anti-fog mirrors, and others, and about the future possibilities.



Professor Fujishima speaking about photocatalysts

Visit to Kazusa DNA Research Institute

December 5

The Kazusa DNA Research Institute in Chiba Prefecture leads the world in DNA research as the world's first research institution specializing in DNA. Following arrival, students attended a lecture introducing the research center and then conducted a DNA extraction experiment. The students learned about the use of a micropipette, which can take up and eject very small amounts of fluid.



During an experiment to extract DNA

Results of Participant Survey

Survey targets: SAKURA SCIENCE High School Program FY2019 participants (including supervisors)

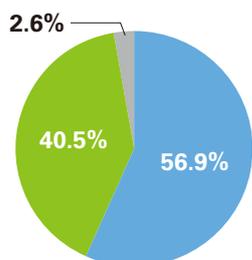
Questionnaire method: Questionnaire form filled in at the end of the program

Number of persons targeted: 1,083

Valid responses: 1,083

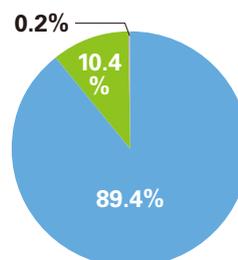
Q1 What was your impression of Japan before participating in this program?

- Very good
- Good
- Not very good
- Not good



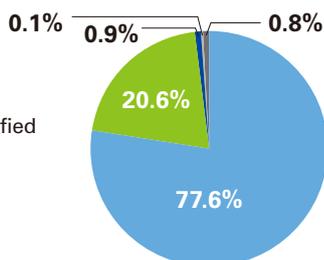
Q2 What is your impression of Japan after your visit?

- Very good
- Good
- Not very good
- Not good



Q3 Were you satisfied with the program?

- Very satisfied
- Relatively satisfied
- Neutral
- Not satisfied
- No comment



Comments from persons who responded with either "Very satisfied" or "Relatively satisfied"

- I learned a lot through the program. Particularly, I learned about leading-edge technology, and about how wonderful Japan is. (India, 16)
- While experiencing Japan's leading-edge science and technology, I was also able to experience the Japanese climate and kindness. I learned comprehensively and deeply about Japan. (China, 16)

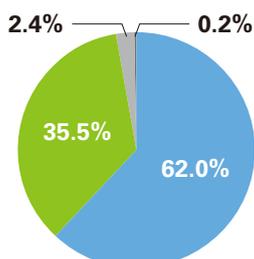
- This program is designed to make it possible to satisfy my curiosity regarding science and technology and broaden my field of view. I was able to broaden my field of view regarding science and technology. Also, it will be useful in my serving better to help develop my country through science and technology, which is my true goal. (Philippines, 16)
- I was able to experience Japanese culture, which is completely different from the culture in my home country. I was able to deepen my love of science through my visits to various facilities. Everyone was very kind and I was very comfortable. (Papua New Guinea, 17)
- I have been a fan of Japan since childhood through animation. I like Japan even more now because lately my interest in science and technology have grown. Studying in Japan is my first choice because I was able to learn various things and I had many chances to experience things by coming to Japan. (Brazil, 17)

Comments from persons who responded with either "Neutral" or "Not satisfied"

- I am a vegetarian, so I was not satisfied by the food. (India, 16)
- The time we were able to stay at the places we visited was short. (Taiwan, 15)

Q4 Would you recommend receiving higher education in Japan to a friend?

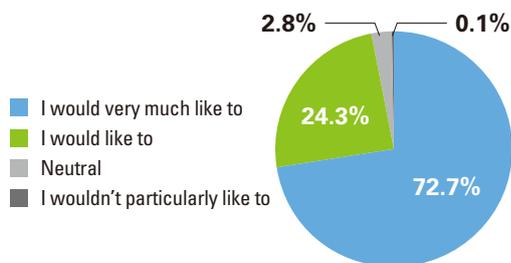
- Would strongly recommend
- Would somewhat recommend
- Would not recommend
- No comment



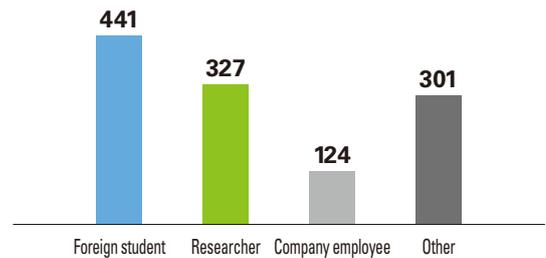
Comments from persons who responded with "Would strongly recommend"

- I became interested in the Japanese education system when we visited high schools and universities. I thought it was very good, so when I go home, my friends will want to get a high school education in Japan when I tell them. (Sri Lanka, 19)
- I think there are many opportunities in Japan for a bright future for myself. (India, 16)
- The environment allows you to learn freely with the latest equipment. Everyone is friendly and eager to learn. (Viet Nam, 17)
- I got the impression that Japan invests in education and research to advance science. (Supervisor, Mexico, 29)
- Japan has a good social culture in that they are punctual and respectful of others. (Indonesia, 16)

Q5 Would you like to come back to Japan?



Q6 For persons who responded with either "I would very much like to" or "I would like to" in Q5, in what capacity would you like to return to Japan? Why? (Multiple answers allowed)



Comments concerning returning to Japan in Q6

Those wanting to study abroad

- Japanese education values human development and independence. Since Japan accepts many international students, it is very attractive to have wide cultural exchanges. (China, 15)
- Because I knew about the existence of famous Japanese universities. (India, 15)
- There are many options for research themes in Japan. (India, 16)
- Japan is developed, and the educational system is wonderful. (Bangladesh, 15)
- I want to learn more about robotics. Japan is the best place to learn about robotics. I also want to try living in the wonderful country of Japan. (Indonesia, 16)
- Compared to other schools overseas, Japan offers a high-quality education at a low cost. (Philippines, 17)
- I realized that Japan is scientifically and socially advanced. For students interested in science like me, Japan seems like an ideal environment. (Viet Nam, 15)

Those wanting to come back as a researcher

- Japan has high technologies that are necessary for all the researchers, so the research done in Japan is of the highest quality. (Viet Nam, 15)
- Education in Japan is well developed and in recent years Nobel laureates have been awarded mainly among Japanese people. Because the Japanese government values education, I believe I can gain advanced knowledge in Japan. (China, 17)
- Japan is a sacred place of academy. I want to learn Japanese for my future. (Taiwan, 17)
- I found a lot of research possibilities when I visited high schools and universities. (Sri Lanka, 19)
- Through this program, I was able to experience Japanese science and technology. I want to do research in Japan. (Republic of Korea, 17)

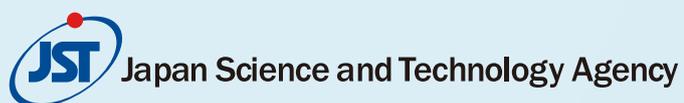
Those wanting to come back as an employee

- I thought I would like to spend the rest of my life here. (India, 15)

Q7 What did you learn in Japan?

- I became even more interested in science and technology. I understood the importance of science and technology. Also, when we think about things, and try to do something, we must first think about the common benefit of mankind. We must not have a narrow vision. (China, 16)
- The walls between countries were built by people. We are the future. (China, 15)
- In Japan, I learned a lot of new and interesting things and gained considerable knowledge. More than those things, I could grow up during the program. (India, 16)
- The most important thing about science and technology is that science and technology are for people all around the world. Our abilities exceed national boundaries, just as Director Mohri said at the National Museum of Emerging Science and Innovation. (Philippines, 17)

- We must be responsible so that we do not contaminate the environment while we develop our countries. (Papua New Guinea, Supervisor, 38)
- Garbage separation is very strict in Japan in order to recycle and reuse garbage. Also, they use the heat generated from burning garbage for heated pools. When I get home, I also want to contribute to separating garbage. (China, 17)
- I thought that in order to become world famous I need adequately to learn, but after coming to Japan I learned that I need to learn and study even more. (Bhutan, 18)
- Everyone plays their role in building their country. (Tonga, 17)
- I learned how science and technology have contributed to the development of the world, and how science and technology are important. (Myanmar, 15)
- Having curiosity itself is meaningful. It is important not to stop wondering. (India, 18)



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