

●Case studies (FY2022～FY2025)

Supporting science and technology

The "9th Shiga Tech Plan Grand Prix"

On July 20, 2024, the 9th Shiga Tech Plan Grand Prix, hosted by the Consortium for Discovery and Development of Growth Industries from Shiga, was held.



Participants



Toyobo Prize was awarded.

The "6th Shiga Junior Research Grant, Results Presentation" was held

On January 27, 2024, the 6th Shiga Junior Research Grant Results Presentation, hosted by the Consortium for Discovery and Development of Growth Industries from Shiga, was held at the Shiga Prefectural Office New Annex in Otsu, Shiga Prefecture. Members of Toyobo participated as a judge and a research supporter.

As a new initiative this fiscal year, companies provide "research supporters." Toyobo contributed six research supporters from its Research Center, who accompanied the research efforts of five teams.

Continuing from last fiscal year, the Toyobo Prize was again awarded to Moriyama Municipal Moriyama Junior High School, this time for its project titled "Utilizing Lake Biwa water plants as the most effective fertilizer."



Award winners and our company's concerned personnel

Visiting lectures and career education

Introducing our company history to High School at Komaba, University of Tsukuba, second-year students researching the spinning industry of the Meiji period (Toyobo General Administration Department)

On May 16, 2023, five second-year students from High School at Komaba, University of Tsukuba, visited our main office to interview General Manager of the General Administration Department.

Students in the high school's Comprehensive Exploration Time class set their own topics and conduct small-group research in the Kansai area. Choosing the spinning industry in the Meiji period as their topic, the five visitors had an interest in our company, the predecessor of which was the spinning company Osaka Boseki.

General Manager explained the ideas of Eiichi Shibusawa, the founder of Osaka Boseki and our company.



"Career Passport" visiting lecture for elementary school students to learn in a fun environment

(Toyobo Packaging Operating Department)

On September 14, 2022, we conducted a visiting lecture titled "The Role of Plastic Films and Environmental Responses" at the private Teikyo University Elementary School in Tokyo, Japan, as part of the "Career Passport*" program. We introduced our business to 24 second grade elementary school students and explained in an easy-to-understand manner the features of plastic films. In addition, the students experienced peeling off the multi-layered films and conducted an odor leakage experiment using different materials. A similar lecture was held at Kougai Elementary School in Tokyo in October.



Visiting lecture at Teikyo University Elementary School



Students experienced smell differences in an odor leakage experiment.

Visiting lecture on technology related to semipermeable membranes, and science careers (Toyobo Corporate Sustainability Department, Environmental Solutions Operating Department, Iwakuni Membrane Plant)

In the lecture titled "Osmosis Phenomenon with Semipermeable Membranes," the lecturers explained the phenomenon of osmosis and the function of semipermeable membranes using experimental equipment and introduced a seawater desalination plant and the semipermeable membrane manufacturing process in operation in an area where water is scarce. The students experienced how water is extracted from seawater using semipermeable membranes by using our "Aqua Hum Hum" reverse osmosis experience machine. In the latter half of the lecture, as part of their career education, the lecturers introduced how they became interested in the field of science, their student life, work at the company, and experiences overseas.



Held "Summer Vacation Junior Science Class" (Toyobo Iwakuni Production Center)

On August 5, 2022, we held "Summer Vacation Junior Science Class" jointly with Yamaguchi Industrial Promotion Foundation, inviting elementary and junior high school students from Yamaguchi Prefecture.

Yamaguchi prefecture holds "Summer Vacation Junior Science Classes" at various locations in the prefecture, asking universities and companies in the prefecture to hold these classes for the purpose of encouraging the development of human resources in the science field. Iwakuni Production Center also agreed with this program and held this class.



There were many more applicants than the maximum number. On the day of the event, 19 elementary and junior high school students and their parents participated in the class. During the experimental experience of osmosis using a semipermeable membrane, the children seemed relaxed thanks to the gentle and approachable talk of our employees who participated as instructors. Instructors, children, and parents cooperated with each other as they conducted the experiments, bringing the venue together.

Conducted a visiting lecture at after-school daycare (Toyobo Tsuruga Research and Production Center)

On August 20, 2021, we conducted a visiting lecture at after-school daycare "Children's Development Support Room Plus up" (Tsuruga City, Fukui Prefecture). In this class, we let the children know about our company in the local area and think about "working."

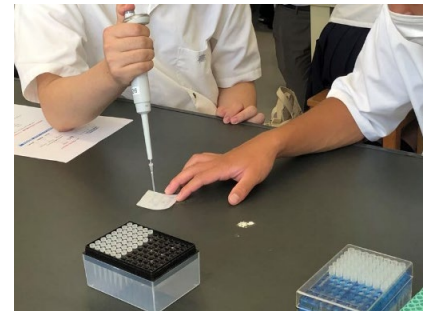
First, after explaining the overview of Tsuruga Research and Production Center, we conducted a quiz to guess the brand of the three-dimensional cushion material BREATHAIR®, The children compared the differences by touching and sitting to hit the same sample that was distributed from among the four cushions with different hardness.



Visiting lecture at Fukui Prefectural Tsuruga High School on PCR test experimental training (Tsuruga Research and Production Center)

On July 19, 2021, we conducted an experimental training on PCR test for 33 second grade students of Fukui Prefectural Tsuruga High School.

The purpose of the training was to have students know what the PCR test, which is used to diagnose the new coronavirus, looks like, and to raise their interest in medicine and pharmacy.



Company Tours and Workplace Experiences

"Machi-Zemi" organized by the Tsuruga Chamber of Commerce and Industry:site tours conducted

(Toyobo Tsuruga Research and Production Center)

On March 3, 2023, we conducted a plant tour under the Tsuruga Machi Seminar* program of the Tsuruga Chamber of Commerce and Industry.

This year, 13 general residents of the city of Tsuruga took part. After receiving an overview of the worksite, participants toured the exhibition room and the Tsuruga Film Plant, walking through the premises.

Many participants reported being surprised to learn how items made at the Tsuruga Research and Production Center are in common use around them.

* Machi Seminar is a small-group free course in which store owners and companies in the city act as instructors to convey specialized knowledge and information to participants. The project is held nationwide with the aim of



building relationships of trust between business operators and local residents through communication in the course.

Company tour by first-year students at Tsuruga High School (Toyobo Tsuruga Research and Production Center)

On November 1, 2022, we held a company tour for 29 first-year students from the Department of Information Accounting at Tsuruga High School. The students' purpose in the tour was to learn about the facility's environment- and energy-related initiatives. In addition to an overview of the site, they listened to a lecture on the site's in-house power generation and on energy use around the world. The students showed great interest, asking questions such as why the site requires in-house power generation.



Company tour by the Kotobuki Class at Nishi Kominkan civic hall (Toyobo Tsuruga Research and Production Center)

On October 11, 2022, the Tsuruga Research and Production Center received a visit by 51 members of the Kotobuki Class, a program of courses and classrooms held for elderly residents in the Nishi district of the city.

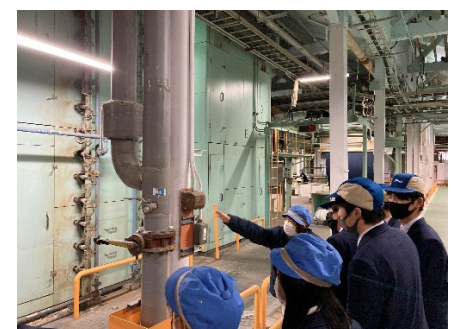
The visitors toured the exhibition room and on-site buses, and learned about the products and the scale of the site. Even long-term residents of Tsuruga commented that they hadn't had a good idea of what was being made at the site, and were finally able to find out.



Company tour for high school students from Takaoka First Private High School (Toyobo Toyama Production Center)

On 16 December 2021, 17 first-year students from Takaoka First Private High School visited the Shogawa Plant as part of the school's career education. After a welcome speech by the General Manager of General Affairs Department of Toyama Production Center, the students were briefed on the company and the overview of the plant, and then toured the plant.

In the exhibition room, we explained how our materials are used in various applications, such as the 'thawb', the folk costumes of Middle Eastern countries, and sportswear, and that different materials have different textures and functions, even if they are the same fibre. In the Spinning and Weaving Production Plant, visitors saw how yarns are processed into fabrics, and in the Processing and Production Plant, they saw how fabrics are made into products through various processes, such as dyeing.



Solution Offering

Sponsorship of the Fukui Television “Hajimete Bako” Project (Toyobo Tsuruga Research and Production Center)

Since 2021, the Tsuruga Research and Production Center has been sponsoring the Fukui Television “Hajimete Bako” (lit. “first box”) project. This project is an initiative that celebrates all newborns. It involves giving a special box, intended to be cherished for decades into the future, to families of newborns. The project, which started in Hiroshima, has been expanding nationwide.

Toyobo provides the “Nioi Bye-Bye Bags®” using our own polyester film “Oriester®”, as a sponsored product included in the “Hajimete Bako” boxes.

(For reference) [Nioi Bye-Bye Bags](#)



Other initiative

Donation of Disaster Stockpiles to Food Bank OSAKA (TOYOBO KANKYO TECHNO CO., LTD.)

TOYOBO KANKYO TECHNO donated disaster supplies stored at its three bases in Osaka, Tokyo, and Okayama to the authorized NPO Food Bank OSAKA.

The company began planning this activity in FY2021 and implemented it on three separate occasions in FY2022. Each year, quantity and expiration dates of stockpiles are checked at each site, and the items are donated three months before their expiration. With the acquisition of ISO 14001 in 2019, a medium-term plan for environmental and safety activities was formulated. Based on the plan, reviewing what can be done as a contribution to society, the company will continue to donate disaster relief supplies.

