

Science education support activities to plant seeds of curiosity for the future of science

Materiality3 Action Target1

Action Plan 2 Activities to support science education using tabletop microscopes

Key words

Contributing to the development of next-generation personnel

STEAM education

Providing equal educational opportunities

Contributing to the development of the next generation of science-based personnel by providing opportunities for everyone to experience science

In recent years, the number of students pursuing the sciences has been declining, and the development of next-generation personnel who will be responsible for future manufacturing and R&D is a pressing social issue for companies.

As an element of its social contribution activities, Hitachi High-Tech has been involved since 2005 in activities with the aim of contributing to the development of science-based personnel. This includes support science education for children and students by using its own products, such as loaning its tabletop electron microscopes.

From FY2022, we have also begun promoting [science education support activities](#) to new audiences, such as [children living on small islands in Japan](#) and students attending [adaptive guidance classes](#). By combining online and offline activities, our sphere of support is expanding to areas and children who have been difficult to reach in the past.

Science education support activities for growing global needs

Since 2008 in Japan, we have lent our tabletop electron microscopes to schools designated as Super Science High Schools (SSHs), where students can receive advanced science education. Among these schools, in FY2023 [Otsuma Ranzan Senior High School's](#) research on the development of fuel cells with low environmental impact and [Ehime University Senior High School's](#) research on marine microplastic waste both won high acclaim in the field of environmental themes, including awards at academic conferences in Japan and abroad and publication in academic journals. Many of the high school students involved are now pursuing science and engineering majors at universities to continue their research, and their future achievements are highly anticipated.

As a new activity, Hitachi High-Tech collaborated with the Nagoya Municipal Minato Disaster Prevention Center to develop a science experience class on the theme of disaster prevention, which has been in considerable focus in the wake of climate change. After learning about soil features revealed by electron microscopy and their relationship with landslides, students were provided with opportunities to operate the equipment. Participants commented that the class was a memorable experience that helped them understand the relationship between science and themes close to their daily lives. As Hitachi High-Tech's [first science event utilizing healthcare products](#), the Healthcare Innovation Center Tokyo hosted a lab tour and an experimental workshop by science artist Genki Ichioka. Participants learned about the principles and heightened their interest in and awareness regarding health by experiencing the operation of a Hitachi High-Tech biochemical analyzer, which is used in hospitals and other medical institutions.

Hitachi High-Tech is also promoting global science education support activities through its overseas subsidiaries. The Dallas, Texas office of Hitachi High-Tech America, for example, has begun operating a new virtual science education center. Utilizing the remote functions of electron microscopes, the company is undertaking new activities together with educational institutions, research institutions, and museums in each community. To cite another initiative, our electron microscope is being lent to Brentwood High School in Brentwood, New York, where students are researching the impact on water quality and ecosystems on Long Island, New York, for studies into biodegradation of garbage (paper/plastic) using fungi and the healthy environment for fostering algae growth. In FY2023, we also began lending equipment to a museum in Singapore. Going forward, we plan to use the museum as a base to develop science education support activities not only in Singapore, but also in neighboring countries and regions.

Aiming for science education support activities linking social issues and science

Hitachi High-Tech's science education support activities that are rooted in local communities have expanded in variation, while at the same time broaden in scope of its globally. We will continue to contribute to "inclusive and equitable quality education and promote lifelong learning opportunities for all" set forth in Goal 4 of the SDGs. And by linking our business activities (products, technologies, and solutions) to various social issues, we will undertake original science education support activities with a strong message for children and society.



Students from Brentwood High School in New York



Science event utilizing healthcare products