The Challenge

Japan is known for its fast-paced, innovative culture and the conveniences that technology brings. One of its most popular conveniences are the millions of vending machines placed around the country. While the vending machines make it easy for citizens to purchase a quick meal or beverage, they are directly impacting the amount of plastic waste that the country generates.

Japan has one of the best recycling infrastructures in the world, with the recycling rate reaching 83% in 2015. However, the cost to recycle a plastic bottle is more expensive than it is just to create a new one, and it requires three times more energy to recycle plastic bottles. This energy is produced from fossil fuel plants that power the recycling facilities, which in turn release greenhouse gases in the atmosphere, and harm the air quality.

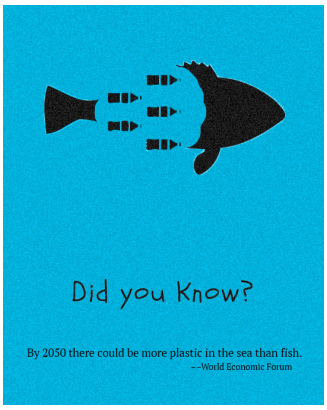
This raises the question: What are other lower cost solutions to protect the long term well-being of the planet?

A Better Solution

The Canadian Academy, a K-12 private school located in Kobe, Japan is striving to change the culture around plastic waste. Six students from the school's Eco Club are the driving force behind this change.

These six students are inspiring the school to eliminate their plastic waste usage completely.

The Eco Club proposed replacing the school's outdated drinking fountains with 18 of Elkay's bottle filling stations and fountains. After hearing about how the Eco Club was using their bottle filling stations to improve their school's sustainability, Elkay® wanted to get involved. Elkay partnered with the school's Eco Club as part of a mentorship program to help create a cultural change campaign within the school.



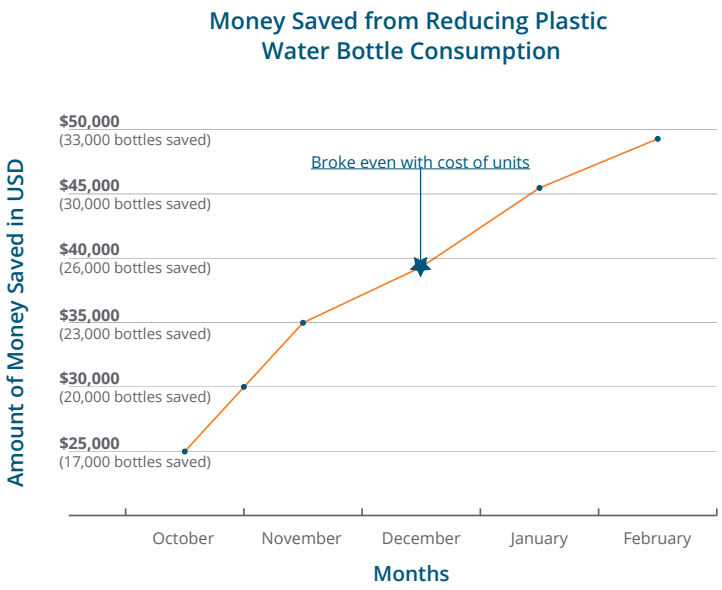
Six students from the Eco Club met with members of Elkay's Marketing team on a monthly basis to discuss tactics for encouraging the use of reusable water bottles, as opposed to purchasing single-use plastic bottles from vending machines.

The students created posters to place around the school to inform their classmates of environmental damage caused by plastic waste. Each week, they also calculated how many plastic bottles were saved from landfills via tracking the GreenTicker™ on Elkay's bottle filling stations. This number of saved bottles was updated and shared weekly on bulletin boards and TV screens throughout the school.

The Results

Between the time when the bottle filling stations were installed in the fall of 2017 and February 2018, the Canadian Academy saved over 32,000 plastic bottles from entering landfills. In Japan, the cost of purchasing that many bottles of water is equivalent to ¥5,229,809 JPY, or $48,969.37 USD.

The cost of the bottle filling stations, installation of all units, and customs fees cost roughly ¥4,200,000 JPY, or just under $40,000 USD. Based on the data collected by the students in the chart to the right, in less than seven months, the students and school faculty saved more money (by not purchasing single-use plastic water bottles) than it had cost the school to purchase the units.



The Eco Club students surveyed 130 secondary school students, and of those surveyed,

> **64% use water fountains more often now that the new bottle filling stations have been installed.**

Aki Hirai, an eighth-grader from the Canadian Academy explained,

> **"I like how [the bottle filling stations] have a counter to show how many bottles we have saved. I think it's really effective because it shows the direct effect we have on the environment."**

The Future

The students' efforts are far from complete. The Eco Club is planning a large campaign during this April's Earth Week to continue to encourage their classmates to reduce their plastic waste consumption. Japan's colder season is beginning to wind down, and the students believe that warmer weather and seasonal sports will encourage even more usage of the bottle filling stations and fountains.