



Special Advertising Feature

A Better Normal For All

# Bright Young Minds: Embracing Today's Challenges to Build a Better Tomorrow

Samsung's Solve for Tomorrow program challenges young people around the world to use science, technology, engineering and math (STEM) to improve their own communities.

When young people in Paraguay were encouraged to tackle an emerging and increasingly urgent environmental challenge—water-resource management—they not only came up with an inspired solution, but also highlighted that today's youth have plenty to offer when it comes to building a better world.

The Guaraní Aquifer—a vast underground water source that runs under Paraguay, Uruguay, Argentina and Brazil—is one of the world's biggest reserves of freshwater, serving some 70 million people. But today it is increasingly contaminated with pollutants and salt. So, two students at Paraguay's National Technical College of Asunción set out to create a portable desalination device powered by a solar panel.

Seeking advice from local businesses and the University of Asunción, the students' innovative and practical solution is just one of many projects to have been recognized in Samsung's annual Solve for Tomorrow education program.

### Inspiring young minds through STEM

Now in its 11th year, Solve for Tomorrow supports young people tackling sustainability or social wellbeing issues through the use of STEM. Combining hands-on research and independent, team-oriented work, the program brings STEM to life beyond the textbooks. Having engaged more than 1.83 million young minds to date, Solve for Tomorrow will be running in 35 countries by the end of 2021.

Jo Goddard, founder of Green & Good Consulting, advises global businesses on sustainability strategies and believes the program is a great example of 'tech for good.' "This is a large, global tech company, with its experience and know-how, working with local communities to solve specific problems that otherwise might not be addressed."

### Hands-on learning

In Colombia, students at the Colegio Loyola school were inspired to find a solution for reducing air pollution in their hometown of Medellín. Colombia consumes more than 11 million metric short tons of coal annually, emitting 22.7 million tons of carbon dioxide a year.

Knowing this, the participants sought out an eco-friendly energy source to replace coal by looking at one of the most abundant resources in the country: coffee.

Colombia is the world's third-largest coffee producer. And according to research conducted by Samsung, one kilogram of coffee grounds contains almost the same amount of energy (18 megajoules) as found in a kilo of coal (18-25 megajoules). Using the abundance of coffee grounds available locally, the students invented fuel pellets that could be burned in place of coal. In 2020, their project was recognized among the award-winners of Samsung's program.



The four young innovators behind Gro, one of five finalists in the U.K.'s Solve for Tomorrow campaign.



While a hands-on approach to innovation is key, Solve for Tomorrow also places mentorship at the center of the program, encouraging its young participants to see a future for their ideas.

### A focus on new innovations

Climate change is an issue faced by everyone around the globe, so education programs, such as Solve for Tomorrow, increasingly focus on protecting the environment alongside societal issues.

"Solving the world's problems is going to require a greater level of technology and innovation," says Dean Kamen, founder of FIRST, a nonprofit organization that provides after-school STEM and robotics programs to U.S. schools. "We need to empower them [students] to be the new leaders in innovation. One of the best ways to do this is to engage them in hands-on learning."

In the U.K., Solve for Tomorrow saw a young team rethink the agricultural sector's water usage. Gro, created by Yorkshire-based 16 and 17-year olds, taps two major trends in technology—ever more powerful microprocessors and the Internet of Things (IoT)—to reduce water use and increase the speed of plant growth. The participants created a hydroponics system that has no soil but instead uses water and a nutrient-rich solution aerated by a pump to boost nutrients in the plant. The system limits evaporation, reducing water use by 98% while speeding up plant growth by 50%. All of this is managed via a system of microprocessors and IoT sensors that detect plant health and make real-time changes to the growing program.

"The goal of Solve for Tomorrow has always been to give the next generation the opportunity to develop a technology-based idea that will help tackle societal issues," says Kyle Brown of Samsung Electronics U.K. "As a Samsung mentor for Gro, it has been incredibly rewarding to see the evolution of their project."

### Sharing skills and support

These innovative solutions underline the value of engaging young people in hands-on STEM projects. Design Thinking training—which is offered to participating teachers and students—and mentorships with Samsung employees nurture creative problem-solving, co-operation and communication skills.

"We believe in the infinite potential of young people, who will lead positive change for our future," says Kihong Na, Samsung's executive vice president and head of the corporate citizenship office. "We are committed to supporting them by sharing our advanced technologies, knowledge, experience and resources, to help them build a better world for all."

Samsung's Solve for Tomorrow education program encourages young minds to use their knowledge in STEM to create tangible solutions to solve societal problems. A unique learning opportunity, the program encourages innovative thinking, creative problem-solving and teamwork. Participants also receive mentorship from Samsung employees to help them bring their ideas to life, while finalists and winners receive Samsung technologies to further their cutting-edge ideas and projects.

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