High School Students Ask If There's a Future in Science—or Science in the Future

A letter from local high school students in La Jolla

Growing up in an era of scientific breakthroughs has come with nothing but the greatest benefits – life-saving vaccinations during the COVID-19 pandemic, robotic body parts and so much more.

Despite the rise in scientific advancement, we now face an attack on science itself. It's no surprise that current funding cuts to scientific research will be a detriment to the future of science. Without essential funding, scientific growth is halted – every sequencing run, every piece of machinery, every life-changing vaccine and medical breakthrough requires copious amounts of financial investment, and without this support, scientific progress will not be able to continue at its current rate.

Funding cuts also disincentivize some of the most essential scientific research, especially in the realm of healthcare, where research plays a key role in saving lives. High schoolers, and more importantly, aspiring scientists, are in the thick of current funding cuts to science as they watch their future careers and aspirations become increasingly unsupported and unsustainable.

Take it from us, three high schoolers who have made it their mission to increase access in STEM fields for themselves and the next generation because in the face of turmoil, silence is not an option.

Listen to Selene Wang, a senior from San Diego, who expresses how "having research opportunities in high school was an important aspect of helping me find my field of interest, and ultimately my direction for my future. As an aspiring chemist, the current challenges in funding make it more difficult for labs to have the resources for this type of educational research, ultimately altering my career considerations; even though I'm very passionate about research, I'm also worried about whether I'll make enough money to sustain a normal standard of living."

Listen to Anabel Weinstein, a junior from San Diego, who shares her thoughts as an aspiring physicist: "Being able to conduct research in high school has completely shaped my life and my future. From opening my eyes to new career paths to getting me immersed in physics at a young age, I, along with many of my peers who have conducted research, have fallen in love with science. However, the current funding cuts are altering this future, not only for current professionals but for young high school and college students as well (who are the future of scientific research).

With decreased educational research opportunities in universities, much of the incredibly impactful and essential research will simply be cut, negatively downsizing the future of science."

Listen to Angelina Kim, a senior from San Diego: "As someone who is pursuing computer science and electrical engineering, I am worried because a large part of research is interdisciplinary. How can we pursue nanobots that attack cancer, use technology to save lives, if we don't have the money?

Also, we, as computer scientists and engineers ourselves, may lose funding and support too, as a lot of our work involves large computing power and big machines that push the limit of our current computing capacity. The use of these machines requires funding to survive."

Clearly, every sector of science and technology is taking a hit with the recent funding cuts. However, despite the challenges facing high schoolers, we have found ways to overcome some of these challenges.

We run the 501(c)(3) nonprofit called All Girls STEM Society, which holds free monthly workshops in libraries around San Diego for girls in grades 3-8 to learn about STEM subjects in order to help uplift the next generation of girls and ameliorate the gender gap within STEM fields.

Even though we as an organization are unable to influence these nationwide policies, we can do our work to keep the sciences alive. Through workshops such as Biophysics and DNA, Cryptography, Astrophysics, through our annual All Girls Math Tournament and NASA Astro Camps, we encourage young people to develop an interest in STEM, even in these challenging times so that their intrinsic passion for their field will keep them going even without external support.

Looking on the more optimistic side, the National Science Foundation wasn't established until a few decades ago and science certainly happened without this type of supporting infrastructure and funding.

The current policies may be a roadblock, it may slow us down, but it is unlikely to affect the fundamental progress of science itself or dull our spirit of innovation.

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