I have always liked math, but it took transferring to a STEM magnet school for me to truly explore the field. My previous school simply did not have the teachers, classes, clubs, or resources I needed to grow. I have these opportunities now, but they aren’t available to my old classmates. We need better STEM education at all schools, not just a select few.

High-quality K-12 STEM education engages future scientists, technicians, engineers, and mathematicians early in school, inspiring them to pursue higher education. Eventually, they enter the rapidly growing STEM job market and contribute to creating innovative technology. STEM also teaches equally important soft skills: The creativity, experimentation, and problem-solving skills learned through STEM are useful for all careers.

Unfortunately, not all students reap these benefits. Disadvantaged students are less likely to receive a high-quality K-16 science education, and less than a quarter of seniors are proficient in science or math. To increase STEM proficiency, state boards of education can take several actions.

**Set application-based learning standards.** Students are people, too! Our eyes glaze over if we learn about DNA ligase without understanding its importance. Prioritizing understanding and application through educational standards promotes meaningful mastery of STEM concepts.

**Incentivize STEM teaching positions.** Many schools do not have enough teachers to offer advanced STEM classes. Students may also struggle to find sponsors for STEM clubs or competitions because teachers are busy organizing other extracurriculars. By increasing the number of qualified STEM teachers—through increasing salaries for current educators or offering loan forgiveness for aspiring ones—states can fill this gap.

**Offer advanced classes through nontraditional means.** Adaptations to the pandemic have made distance learning and online classes more accessible. If a disadvantaged school cannot offer a STEM course, it should be encouraged to organize other arrangements: interdistrict learning, dual-credit classes with regional colleges, online courses or certifications, or STEM research/internship opportunities with local professionals. State boards should encourage schools to cooperate with outside agencies and allow more programs to count for credit.

**Involves industry leaders and stakeholders.** Most businesses require data analysis, information technology, or systems engineering to grow. These companies have a large stake in supporting STEM education and could help introduce students to how STEM is applied to real-world challenges. Districts should develop partnerships with interested businesses to offer STEM internships, scholarships, and career training programs to promote STEM education.

**Continue seeking student opinions.** The only way to know if students are engaged with their STEM instruction is to ask them. To learn what is useful—say, interesting teachers and advanced classes—and what is not (rote memorization), continue seeking student voices to shape educational policy.

STEM education may seem contrived or unnecessarily difficult to many students, but the skills it teaches are universally important. State boards should invest effort in improving STEM education for everyone.

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