

Teachers and students can fill the STEM pipeline

JD Chesloff, Massachusetts Business Roundtable

I was disturbed to learn recently that one in five adults lacks the math competency of a middle-schooler.

No wonder government and industry leaders are concerned that employers can't find workers with STEM (science, technology, engineering, math) competencies — skills necessary to compete in a global, 21st century economy. In Massachusetts, there are 2.3 unemployed people for every one job, but only one unemployed person for every 2.1 STEM jobs. National figures are similar. The [U.S. Department of Commerce](#) projects that STEM occupations will grow by 17 percent, compared with 9.8 percent for all other jobs.

Demand is high. Supply is low. And adults can't do math. Not a formula for increasing competitiveness.

All is not lost, however, Massachusetts students score well on state, national and international math and science tests. The American Institute of Physics ranks us "best in the U.S." in math and science proficiency. Our STEM challenge is more about inspiration than proficiency. While students show aptitude in STEM subjects, they pursue STEM careers at alarmingly low rates, below the national average and our competitor states.

Young children are natural scientists and engineers. Core elements of STEM — creativity, collaboration, critical thinking — are innate during play. Kids don't know they're doing science and engineering. They're just being kids.

We should foster interest in STEM as early as possible and introduce teachers to engaging programs using these skills throughout the education continuum. Engaging teachers in innovative ways is key to the Commonwealth's STEM "@Scale Initiative," which identifies programs proven to advance the state's STEM Plan.

One such program is the Museum of Science's Gateway Project. The Gateway Project has reached 85 school districts and 425 K-12 educational leaders, serving 45 percent of the state's students. Districts develop action plans to implement K-12 STEM programs, and educators explore standards-based curricula and assessments.

With increased private investment in such programs, matched by the state, the goal is to inspire children, keep the spark alive, and create workers with the skills to fuel our economy.

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