



STEM at La Academia: What is it and why is it so important?

STEM stands for science, technology, engineering and math but it is not merely the sum of these four disciplines. In fact, it's not really a discipline at all; it's a culture of inquiry and problem-solving that will prepare students for success in the 21st century workforce.

Becoming a STEM school requires rigorous academic learning in all content areas, including the arts and humanities. It suggests that the pedagogy in each content area prioritize hands-on learning, an evidence-based inquiry process, authentic and relevant content and the specific work-based skills all students will need in the future: strong oral and written communications skills, collaboration, digital literacy, math competence, and agency, which is defined as the capacity of an individual to make independent choices and to accept responsibility for those choices.

Georgetown's Center on Education and the Workforce predicts that the total number of STEM jobs will grow by 26% between 2010 and 2020. The Georgetown Center also projects that professional and technical jobs in healthcare, which it doesn't include in its STEM numbers, will grow by 31%, far faster than the workforce as a whole.¹ In *The Hidden STEM Economy*, Jonathan Roswell of the Brookings Institution argues that most studies dramatically undercount middle-level STEM jobs that are available to workers without a 4-year college degree – jobs that pay 10% higher than jobs with the same educational requirements.² It is clear that in the future, STEM jobs will dominate the employment landscape. The percentage of females and Native Americans who say they're interested in STEM fields is now slightly higher than it was in 2000; however, the percentage of African American and Latino students who say the same is down dramatically.³ Statistics like these underscore how ill prepared our nation's youth, particularly women, African Americans and Latino students, are for 21st century workforce demands.

Approximately 66% of high school graduates enroll in a 4-year degree program. The sad reality is that three out of four of these students leave college prior to graduation, lack the STEM skills needed to obtain family-sustaining employment, are saddled with thousands of dollars in college debt and have no realistic way to dig themselves out of the economic hole we have helped them to create.⁴ STEM can offer La Academia students a road to a prosperous future, and the work-based skills they will need regardless of the occupation they might choose to pursue.

¹ Rosen, Linda. (2013). *The Truth Hurts: The STEM Crisis is Not a Myth*. Huffington Post. Retrieved from http://www.huffingtonpost.com/linda-rosen/the-truth-hurts-the-stem-_b_3900575.html

² Rothwell, J. (2013). *The Hidden STEM Economy*. The Brookings Institution: Washington, D.C.

³ U.S. News and World Report. (2015). *STEM Workforce No More Diverse Than 14 Years Ago*. Retrieved from <http://www.usnews.com/news/stem-solutions/articles/2015/02/24/stem-workforce-no-more-diverse-than-14-years-ago>

⁴ Fleming, K. (2013). *Success in the New Economy*. Available at <https://www.youtube.com/watch?v=zs6nQpV1164>.