

STEM education — science, technology, engineering and mathematics — is a pathway to prosperity.

The ability of U.S. businesses to remain competitive in the global economy depends on increasing the number of qualified STEM graduates. Companies can't recruit their way out of the shortage of STEM workers. We can — and must — secure our nation's future by supporting high-quality STEM education at every level to prepare a skilled workforce and strengthen U.S. competitiveness.

The STEM Challenge

7.6 million people work in STEM occupations, almost all of which pay above the median wage. STEM jobs are growing at two times the rate of non-STEM jobs.¹ Yet too few students are pursuing a STEM education, despite the workforce demand for employees with those skills. One reason for this is because STEM programs are still built on existing state standards in mathematics and science, which typically do not focus on exposing students to engineering practices and mathematical applications regularly.

Companies are now competing with each other for a limited number of students graduating in STEM fields. The only way to solve this problem is to increase the number of students who are college and career ready.

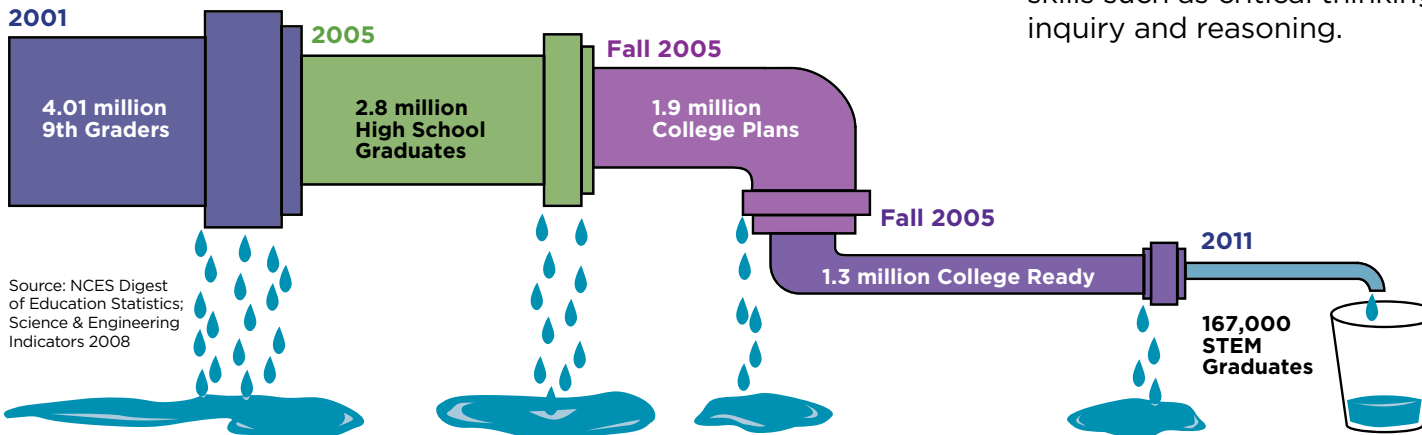
Promoting STEM education — anchored in college- and career-ready standards — nurtures a skilled workforce, widens the pool of desired job applicants, and strengthens U.S. competitiveness.



Why College- and Career-Ready STEM expectations?

- We can't successfully prepare students for college and STEM careers unless we set the right expectations and goals. Standards, such as the Common Core State Standards in mathematics and the Next Generation Science Standards, provide the necessary foundation upon which the rest of the system can be built.
- These new standards encourage students to apply their knowledge and skills to solve real-world problems starting in the early grades to engage students at all levels.
- Implementing science standards will help build a more robust STEM pipeline by preparing more high school graduates for the rigors of science-based college courses and careers.
- Looking ahead, employers will be able to hire workers with stronger skills—both in specific content areas and skills such as critical thinking, inquiry and reasoning.

A Leaking STEM Pipeline



¹ http://www.esa.doc.gov/sites/default/files/reports/documents/stemfinaljuly14_1.pdf

² http://www.bhef.com/publications/documents/BHEF_Research_Brief-STEM_Interest_and_Proficiency.pdf

³ http://www.esa.doc.gov/sites/default/files/reports/documents/stemfinaljuly14_1.pdf

