VITAL SIGNS

GEORGIA

Business leaders in Georgia cannot find the science, technology, engineering and mathematics (STEM) talent they need to stay competitive. Students' lagging performance in K-12 is a critical reason why. The good news is that the nation's most effective STEM education programs can help turn the tide.

The state's students have made real progress in math over the past decade, though that progress has slowed. Large racial and ethnic achievement gaps persist in Georgia, as in all states. Not enough students get the chance to learn rich and challenging content that prepares them for college and careers, and few eighth graders have teachers with an undergraduate major in math or science.

GEORGIA NEEDS MORE STEM TALENT

STEM fields are growing in Georgia

Between 2017 and 2027:

STEM jobs will grow

13%

Non-STEM jobs will grow

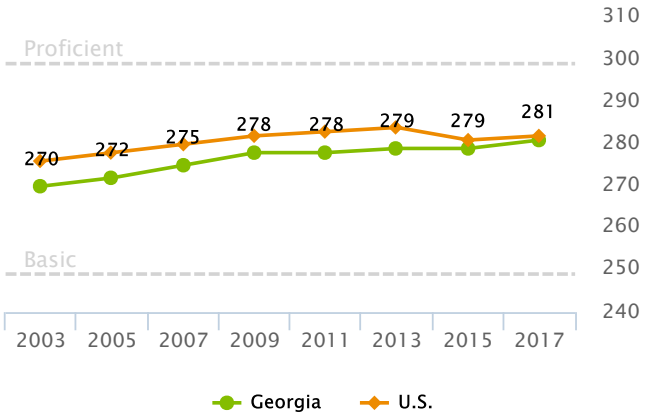
8%

THE GEORGIA STEM SKILLS SHORTAGE STARTS EARLY

Progress in math has faltered

After years of gains in math, Georgia's progress has slowed.

Trends in 8th grade math scores, 2003-2017

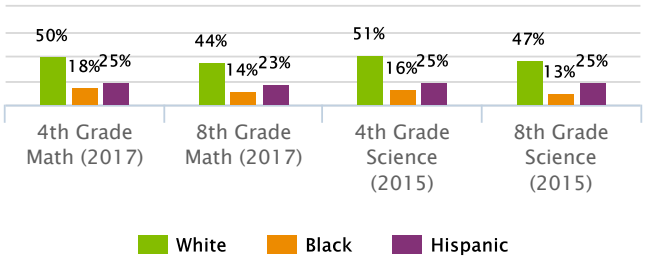


SOURCE: U.S. Department of Education, 2003–2017

Students of color lag farthest behind

Closing achievement gaps must remain a priority.

Percentage of Georgia students at or above proficient, by race/ethnicity



SOURCE: U.S. Department of Education, 2015–2017

*Data not available or reporting requirements not met.

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For the complete state report, methodology, and sources, see vitalsigns.ecs.org (vitalsigns.ecs.org)

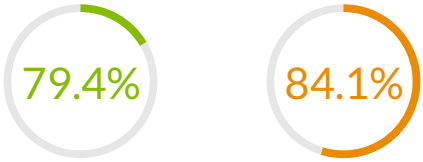
GEORGIA

VITAL SIGNS

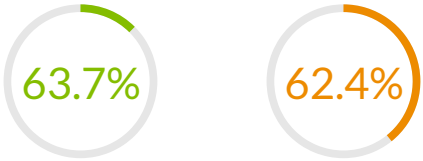
The state must plug the gaps in the STEM pipeline

The Georgia STEM pipeline loses young people at every level of the education system. Low graduation rates from high school and college narrow the pipeline of students who can gain advanced STEM skills. Of those students who do graduate, few get a post-secondary degree in STEM.

What percentage of high school students graduate? (2014-2015)

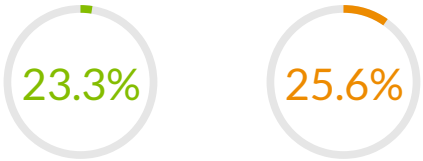


Of high school graduates who enter a 4-year degree program, what percentage graduate? (2012-2013)



Of high school graduates who enter a 2-year associate's degrees program, what percentage graduate? (2012-2013)

What percentage of certificates and degrees is in STEM fields? (2014-2015)



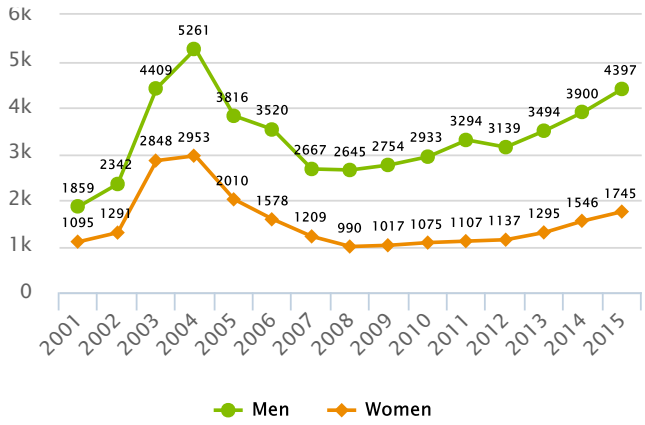
TAP GEORGIA'S FEMALE AND MINORITY TALENT

Together, females and minorities make up more than half of Georgia's population, yet they are much less likely to earn STEM degrees or become STEM professionals. Closing these gaps can pay big dividends in the state.

Women have lost ground in computing

The available talent in computer science would rise dramatically if the state simply closed the gender gap in these subjects.

Number of computing degrees/certificates in Georgia

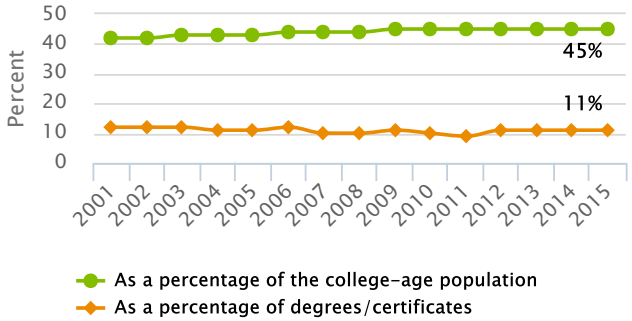


SOURCE: U.S. Department of Education, 2001–2015

People of color are not gaining ground in engineering degrees

It is critical to prepare and inspire many more students of color to pursue STEM subjects such as computer science and engineering.

Underrepresented minorities in Georgia earning engineering degrees/certificates



SOURCE: U.S. Department of Education, 2001–2015

*Data not available or reporting requirements not met.

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GEORGIA

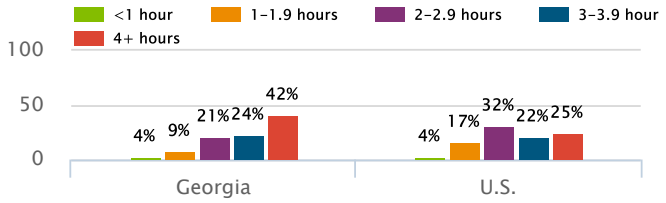
VITAL SIGNS

GIVE GEORGIA STUDENTS ACCESS TO BETTER STEM LEARNING OPPORTUNITIES

Lack of access to such opportunities severely limits young people's college and career prospects.

The state should make time for elementary science

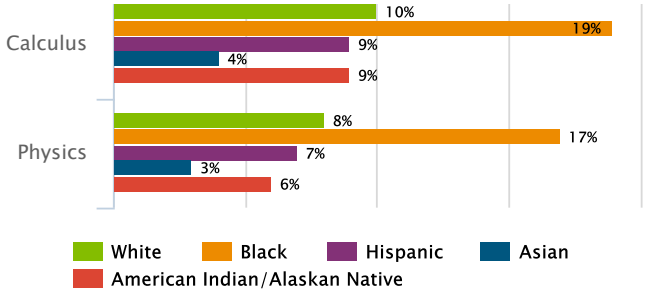
Hours per week spent on science, grades 1-4, 2015



The state should improve access to advanced courses

Many students lack access to such courses.

Students in Georgia high schools that do not offer challenging math and science courses, 2013/14



Success in Advanced Placement courses can put more students on a path to STEM careers.

Of the high school graduating class of 2015 in Georgia:

	Took AP Math Exam	Scored 3+ on AP Math Exam
All Students	15%	8%
White	16%	10%
Black	8%	2%
Hispanic	14%	6%
Asian	47%	32%
American Indian/Alaskan Native	16%	8%

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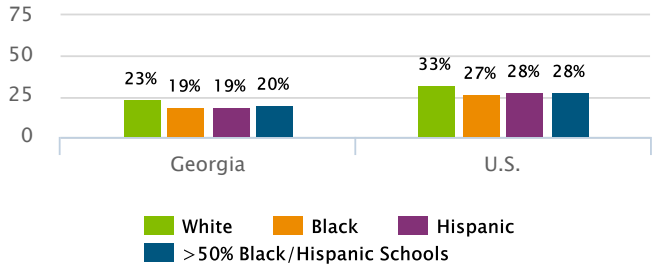
DEVELOP AND RETAIN TALENTED STEM TEACHERS IN GEORGIA

Research shows that teachers' content knowledge and teaching experience can affect student performance

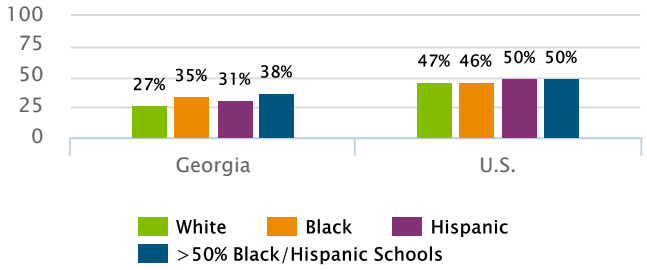
Boost teachers' content knowledge

Eighth-graders whose math teachers have an undergraduate major in math, 2017



SOURCE: U.S. Department of Education 2017

Eighth-graders whose science teachers have an undergraduate major in science, 2015

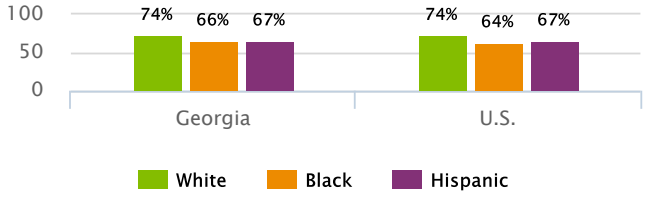


SOURCE: U.S. Department of Education 2015

Retain excellent teachers

Minority students are most likely to have inexperienced teachers

Eighth-graders whose math teachers have 6+ years of experience teaching their subject



SOURCE: U.S. Department of Education 2017

*Data not available or reporting requirements not met.

GEORGIA

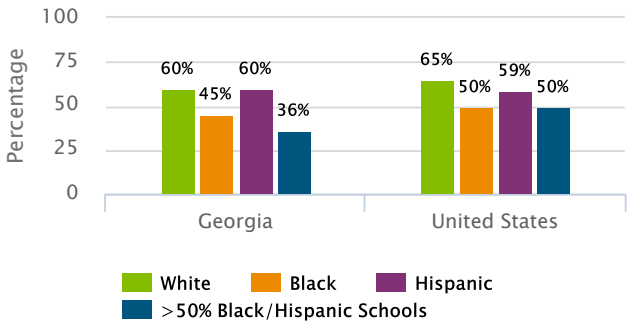
VITAL SIGNS

GIVE GEORGIA SCHOOLS AND TEACHERS THE RESOURCES THEY NEED

Teachers in Georgia need better resources, facilities, and teaching materials to succeed.

Too many teachers lack the tools of their trade

Eighth-graders whose science teachers say they have all or most of the resources they need, 2015

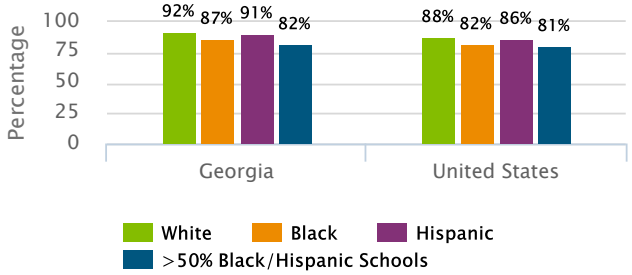


SOURCE: U.S. Department of Education, 2015

*Data not available or reporting requirements not met.

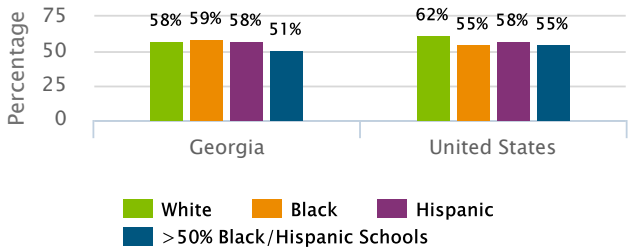
The state should improve access to science facilities and supplies

Eighth-graders whose schools have science labs, 2015



SOURCE: U.S. Department of Education, 2015

Eighth-graders whose schools report that supplies or materials for science labs are available "to a large extent," 2015



SOURCE: U.S. Department of Education, 2015

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