

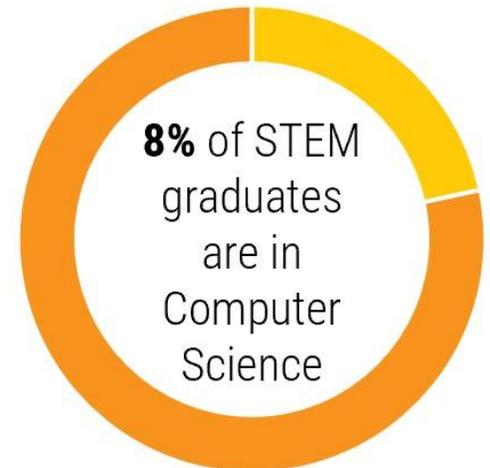
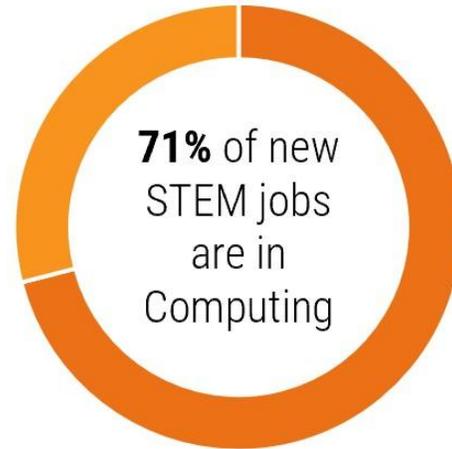
## Support K-12 Computer Science Education in Florida



### COMPUTER SCIENCE DRIVES JOB GROWTH AND INNOVATION THROUGHOUT OUR ECONOMY AND SOCIETY.

Computing occupations are the **#1 source** of all new wages in the U.S. and make up two-thirds of all projected new jobs in STEM fields, making Computer Science one of the most in-demand college degrees.

Computing is used all around us and in virtually every field. It's foundational knowledge that all students need. But computer science is marginalized throughout education. Fewer than half of U.S. schools offer any computer science courses and only 8% of STEM graduates study it. We need to improve access for all students, including groups who have traditionally been underrepresented.



**93%**

› Of parents want their child to have access to Computer Science programs.

**40%**

› Of schools offer Computer Science Pathways.

**50%**

› Of Americans rank Computer Science as one of the two most important subjects. *(After reading and writing)*

**75%**

› Of Americans think Computer Science is cool in a way it wasn't 10 years ago.

**67%**

› Of parents and **56%** of teachers believe students should be required to learn computer science.

**6x** more likely

› Students who learn computer science in high school are 6 times more likely to major in it, and women are 10 times more likely.

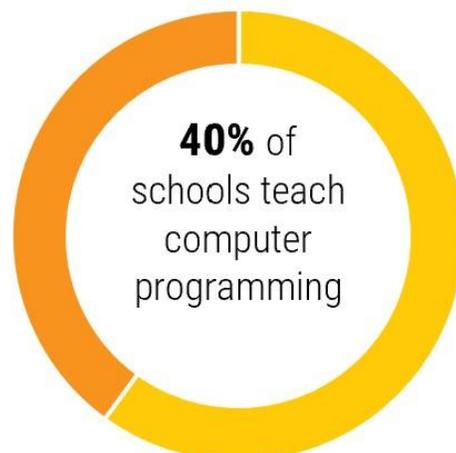
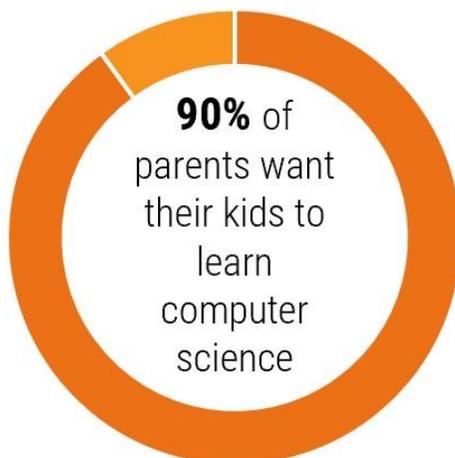
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## COMPUTER SCIENCE IN FLORIDA

***Florida currently has 22,365 open computing jobs  
That's 3.6 times the average demand rate in Florida.***

- The average salary for a computing occupation in FL is \$78,531, which is significantly higher than the average salary in the state (\$44,050). The existing open jobs alone represent a \$1,756,345,815 opportunity in terms of annual salaries.
- Florida had only 2,486 computer science graduates in 2015; only 19% were female.
- Only 7,233 exams were taken in AP Computer Science by high school students in Florida in 2017. Only 25% were female; only 2,199 exams were taken by Hispanic or Latino students; only 598 exams were taken by Black students; only 17 exams were taken by Native American or Alaska Native students; only 9 exams were taken by Native Hawaiian or Pacific Islander students.
- Only 241 schools in FL (22% of FL schools with AP programs) offered an AP Computer Science course in 2016-2017, which is 95 more than the previous year. There are fewer AP exams taken in computer science than in any other STEM subject area.
- Universities in Florida did not graduate a single new teacher prepared to teach computer science in 2016.



# WHAT CAN YOU DO TO IMPROVE K-12 CS EDUCATION?

- Call on your school or district to expand computer science offerings at every grade level.
- Ask your local school district to allow computer science courses to satisfy a core math or science requirement.
- Visit [stemfuse.com](http://stemfuse.com) to learn about our authentic STEM, CTE and Computer Science pathway and digital platform. Or [schedule](#) a call with us and see what STEM Fuse can do for you!
- Sign the petition at [www.change.org/computerscience](http://www.change.org/computerscience) to join 100,000 Americans asking Congress to support computer science.



## STEM FUSE IMPACT IN FLORIDA

***STEM Fuse is in over 15,000 schools across the United States serving over 2 million students.***

Our regional partners last year included Dade, Seminole, Bay, Charlotte, Escambia, Duval, Clay, Hernando, St. Lucie, and Indian River. They have all completed professional learning for over 3,000 K-12 teachers in the areas of Computational Thinking & Problem Solving, Data Types & Structures, Programming Logic, Programming languages, Java, Hardware, Software, & Networking, History & Social Impacts of Computing, and Computer Science Pedagogy. The teacher passing rate for our FTCE exam prep is 25% higher than the state average.

We'd love for your school to enjoy these amazing statistics too!

***“Computer Science is a liberal art: it’s something that everybody should be exposed to and everyone should have a mastery of to some extent.”***  
— Steve Jobs

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# WHAT CAN THE FEDERAL GOVERNMENT DO

## *to support computer science in grades K-12?*

Access to computer science courses is a bipartisan issue that can be addressed **without adding to the Federal budget.**

Tell your representatives in Washington, D.C. that you support funding to expand access to this foundational 21st-century subject in your community.

Over 100,000 Americans, CEOs of the largest companies in every major industry, 29 governors, and major K-12 education leaders have all joined forces to call on Congress to support this idea. You can see their open letter (and add your name in support) at [www.change.org/computerscience](http://www.change.org/computerscience).



# WHAT CAN YOUR STATE DO

## *to improve computer science education?*

***States and local school districts need to adopt a broad policy framework to provide all students with access to computer science.***

- Florida has not yet created a state plan for K-12 computer science. A plan that articulates the goals for computer science, strategies for accomplishing the goals, and timelines for carrying out the strategies is important for making computer science a fundamental part of a state's education system.
- Florida has established K-12 computer science standards.
- Florida does provide dedicated funding for rigorous computer science professional development and course support. Although funds may be available via broader programs, the state can strengthen its computer science programs by creating specific opportunities to bring computer science to school districts, such as matching fund programs.
- Florida has clear certification pathways for computer science teachers.
- Florida has not yet established programs at institutions of higher education to offer computer science to preservice teachers. The computer science teacher shortage can be addressed by exposing more preservice teachers to computer science during their required coursework or by creating specific pathways for computer science teachers.

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## WHAT CAN YOUR STATE DO - Cont.

- ✔ Florida has a computer science specialist in the state education authority; but could consider creating a position to develop computer science policy.
- ✔ Florida does require all secondary schools offer computer science. The state can support the expansion of computer science courses by adopting policies that require schools to offer a computer science course based on rigorous standards, with appropriate implementation timelines and allowing for remote and/or in-person courses.
- ✔ Florida allows computer science to count for a core graduation requirement. Find out how Florida allows computer science to count towards graduation at <http://bit.ly/9policies>.
- ❑ Florida does not allow computer science to count as a core admission requirement at institutions of higher education. Admission policies that do not include rigorous computer science courses as meeting a core entrance requirement, such as in mathematics or science, discourage students from taking such courses in secondary education. State leaders can work with institutions of higher education to ensure credit and articulation policies align with secondary school graduation requirements.

**JOIN OUR EFFORTS TO GIVE EVERY STUDENT IN EVERY SCHOOL  
THE OPPORTUNITY TO LEARN COMPUTER SCIENCE.**

[Chat](#) with our School District Sales and PD Coordinator to learn how STEM Fuse can help!

[STEM Fuse](#) was founded in 2009 and currently taught in over 15,000 schools across the United States.

We are a fully featured digital platform and curriculum to fit every K-12 classroom. Our mission at STEM Fuse is to provide impactful and affordable curriculum solutions to schools, educators, and students.

*Data is from the Conference Board for job demand, the Bureau of Labor Statistics for state salary and national job projections data, the College Board for AP exam data, the National Center for Education Statistics for university graduate data, the Gallup and Google research study Education Trends in the State of Computer Science in U.S. K-12 Schools for schools that offer computer science and parent demand, and STEM Fuse for its own courses, professional learning programs, and participation data.*

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