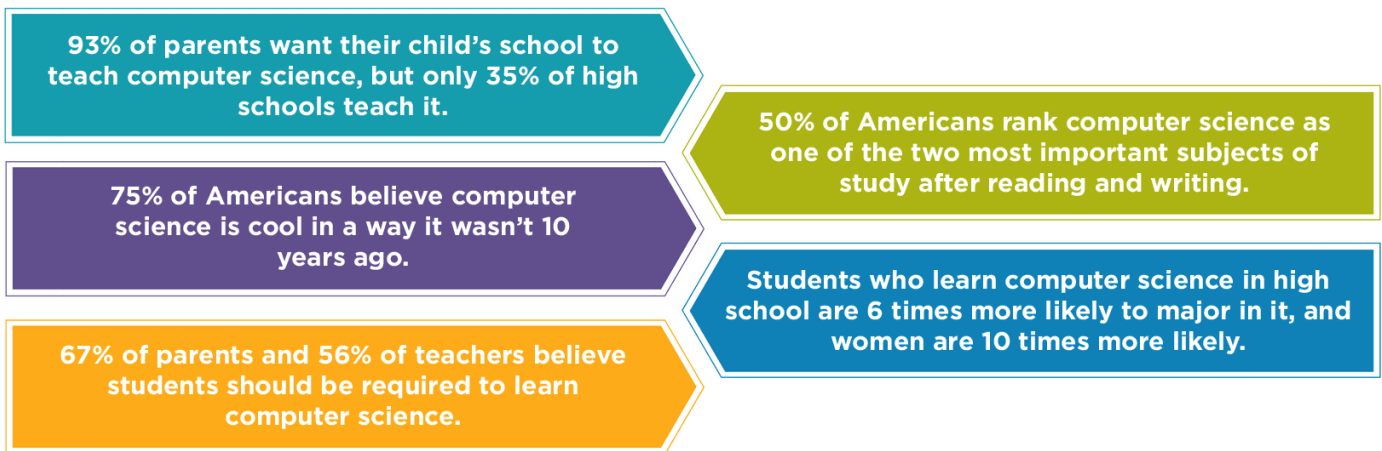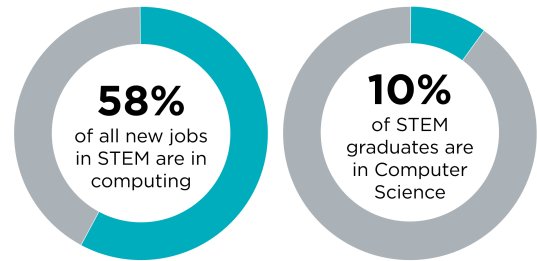# Support K-12 Computer Science Education in Mississippi

Computer science drives job growth and innovation throughout our economy and society. Computing occupations are the **number 1 source of all new wages in the U.S.** and make up over half of all projected new jobs in STEM fields, making Computer Science one of the most in-demand college degrees. And 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. Only 35% of U.S. high schools teach any computer science courses and only 10% of STEM graduates study it. We need to improve access for all students, including groups who have traditionally been underrepresented.

58% of all new jobs in STEM are in computing

10% of STEM graduates are in Computer Science

93% of parents want their child's school to teach computer science, but only 35% of high schools teach it.

50% of Americans rank computer science as one of the two most important subjects of study after reading and writing.

75% of Americans believe computer science is cool in a way it wasn't 10 years ago.

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

67% of parents and 56% of teachers believe students should be required to learn computer science.

Computer science in Mississippi

- Mississippi currently has **907 open computing jobs** (3.0 times the average demand rate in Mississippi).
- The average salary for a computing occupation in MS is **$70,798,** which is significantly higher than the average salary in the state ($38,910). The existing open jobs alone represent a **$64,213,949 opportunity** in terms of annual salaries.
- Mississippi had only **207 computer science graduates** in 2017; only **16**% were female.
- In Mississippi, only **18% of all public high schools teach computer science.**
- Only **191 exams were taken in AP Computer Science by high school students in** Mississippi in 2018 (9 took AP CS A and 182 took AP CSP).
- Only 34% were female (0% for AP CS A and 36% for AP CSP); only 9 exams were taken by Hispanic or Latino students (0 took AP CS A and 9 took AP CSP); only 29 exams were taken by Black students (0 took AP CS A and 29 took AP CSP); only 1 exam was taken by American Indian or Alaska Native students (0 took AP CS A and 1 took AP CSP); only 1 exam was taken by Native Hawaiian or Pacific Islander students (0 took AP CS A and 1 took AP CSP).
- Only **20 schools** in MS (11% of MS schools with AP programs) offered an AP Computer Science course in 2017-2018 (2% offered AP CS A and 10% offered AP CSP), which is 7 more than the previous year. There are fewer AP exams taken in computer science than in any other STEM subject area.
- Universities in Mississippi did not graduate a single new teacher prepared to teach computer science in

2016.

- According to a representative survey from Google/Gallup, school administrators in MS support expanding computer science education opportunities: 78% of principals surveyed think CS is just as or more important than required core classes.

90%
of parents want their child to study computer science

35%
of high schools teach computer science
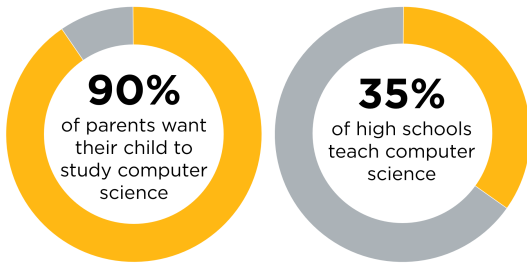
What can you do to improve K-12 CS education?

1. Call on your school to expand computer science offerings at every grade level.
2. Ask your local school district to allow computer science courses to satisfy a core math or science requirement.
3. Visit **www.code.org/educate/3rdparty** to find out about courses and curriculum from a variety of third parties, including Code.org.
4. Visit **www.code.org/promote/MS** to learn more about supporting computer science in your state.
5. Sign the petition at **www.change.org/computerscience** to join 100,000 Americans asking Congress to support computer science.

Code.org's Impact in Mississippi

- In Mississippi, Code.org's curriculum is used in
  - 20% of elementary schools
  - 18% of middle schools
  - 8% of high schools
- There are 3,519 teacher accounts and 137,364 student accounts on Code.org in Mississippi.
- Of students in Mississippi using Code.org curriculum last school year,
  - 73% attend high needs schools
  - 73% are in rural schools
  - 49% are female students
  - 41% are underrepresented minority students (Black/African American, Hispanic/Latino, American Indian, or Hawaiian)
- Code.org, its regional partner(s) Mississippi State University, and 10 facilitators have provided professional learning in Mississippi for
  - 597 teachers in CS Fundamentals (K-5)
  - 173 teachers in Exploring Computer Science or Computer Science Discoveries
  - 32 teachers in Computer Science Principles

"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

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. The following nine recommendations are a menu of best practices that states can choose from to support and expand computer science. Not all states will be in a position to adopt all of the policies. Read more about these 9 policy ideas at **https://code.org/files/Making_CS_Fundamental.pdf** and see our rubric for describing state policies at **http://bit.ly/9policiesrubric**.

☐ Mississippi **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.

☑ Mississippi has established K-12 computer science standards.

☐ Mississippi **does not yet** 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.

☑ Mississippi has clear certification pathways for computer science teachers.

☐ Mississippi **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.

☐ Mississippi **does not yet** have dedicated computer science positions in state or local education agencies. Creating a statewide computer science leadership position within the state education agency can help expand state-level implementation of computer science education initiatives. Similar positions at the local level could support districts' expansion of course offerings and professional development.

☐ Mississippi **does not yet** require that 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.

☑ Mississippi allows computer science to count for a core graduation requirement. Find out how Mississippi allows computer science to count towards graduation at **http://bit.ly/9policies**.

☑ Mississippi allows computer science to count as a core admission requirement at institutions of higher education.

Follow us!

Join our efforts to give every student in every school the opportunity to learn computer science. Learn more at **code.org**, or follow us on **Facebook** and **Twitter**.

Launched in 2013, Code.org® is a nonprofit dedicated to expanding access to computer science, and increasing participation by women and underrepresented students of color. Our vision is that every student in every school should have the opportunity to learn computer science.