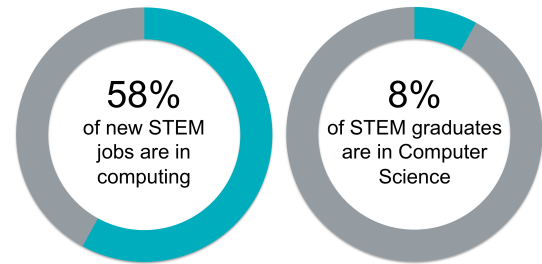


Support K-12 Computer Science Education in Washington

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. 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's school to teach computer science, but only 40% of schools teach it.

75% of Americans believe 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.

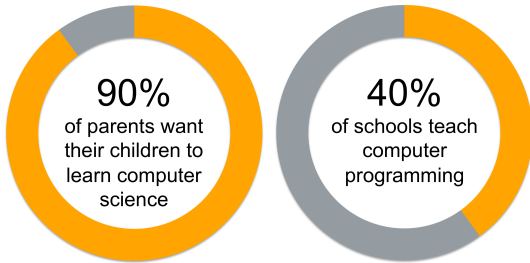
50% of Americans rank computer science as one of the two most important subjects of study after reading and writing.

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

Computer science in Washington

- Washington currently has **16,492 open computing jobs** (2.4 times the average demand rate in Washington).
- The average salary for a computing occupation in WA is **\$107,853**, which is significantly higher than the average salary in the state (\$55,810). The existing open jobs alone represent a **\$1,778,711,676 opportunity** in terms of annual salaries.
- Washington had only **1,212 computer science graduates** in 2015; only **21%** were female.
- Only **2,637 exams were taken in AP Computer Science by high school students** in Washington in 2017 (1,900 took AP CS A and 737 took AP CSP).
- Only 28% were female (29% for AP CS A and 26% for AP CSP); only 199 exams were taken by Hispanic or Latino students (119 took AP CS A and 80 took AP CSP); only 43 exams were taken by Black students (21 took AP CS A and 22 took AP CSP); only 8 exams were taken by Native American or Alaska Native students (6 took AP CS A and 2 took AP CSP); only 9 exams were taken by Native Hawaiian or Pacific Islander students (4 took AP CS A and 5 took AP CSP).
- Only **135 schools** in WA (31% of WA schools with AP programs) offered an AP Computer Science course in 2016-2017 (23% offered AP CS A and 14% offered AP CSP), which is 37 more than the previous year. There are fewer AP exams taken in computer science than in any other STEM subject area.
- Universities in Washington did not graduate a single new teacher prepared to teach computer science in

2016.



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/WA 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 Washington

There are 26,119 teacher accounts and 776,822 student accounts on Code.org in Washington .

Code.org, its regional partner(s) NorthEast Washington Educational Service District 101 and Puget Sound Educational Service District, and 34 facilitators have provided professional learning for 1,782 teachers in CS Fundamentals (K-5) , 137 teachers in Exploring Computer Science or Computer Science Discoveries, and 78 teachers in Computer Science Principles in Washington .

“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 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 that will America remain secure and globally competitive. 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.

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>.

- Washington **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.
- Washington has established K-12 computer science standards.
- Washington has allocated funding for rigorous computer science professional development and course support.
- Washington has clear certification pathways for computer science teachers.
- Washington **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.
- Washington has a dedicated computer science position in the state education agency.
- Washington **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.
- Washington allows computer science to count for a core graduation requirement. Find out how Washington allows computer science to count towards graduation at <http://bit.ly/9policies>.
- Washington 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 non-profit 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.

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 Code.org for its own courses, professional learning programs, and participation data.