2024 State of Computer Science Education

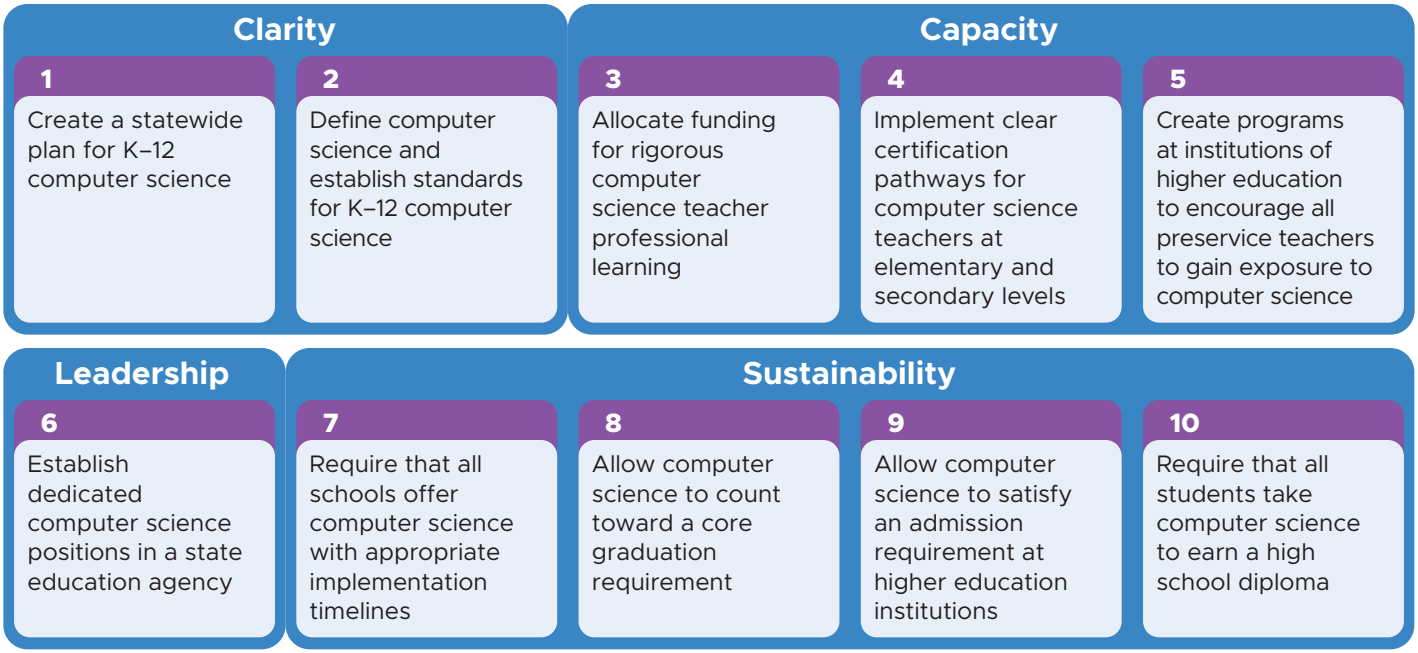
The United States is at a critical juncture in education policy: How do we prepare our students for a world increasingly driven by computing and generative artificial intelligence? Since the last edition of this report, there has been growing recognition among U.S. policymakers of the urgency of this issue, with 11 states now requiring students to earn credit in computer science to graduate from high school. The 2024 State of Computer Science Report urges policymakers to ensure that all students in every state learn computer science.

Over the last eight years, there has been significant progress, with more students than ever before taking computer science. Yet, millions of students still lack opportunities to engage in this essential subject. Only 60% of public high schools offer a foundational computer science course, and just 6.4% of high school students are enrolled annually. Young women, in particular, are far less likely to take computer science. This disparity underscores the urgent need for action.

The need for computer science education is understood worldwide. In 2023, the European Union called on all member countries to make computer science a required subject. Without decisive action, the United States risks falling behind on the global stage.

A recent University of Maryland study underscores the importance for all schools to invest in computer science education. The research reveals that offering just one computer science course in high school can increase students' earnings by at least 8% by age 24. The benefits are even more pronounced for low-income students, Black students, and young women.

The Code.org Advocacy Coalition recommends 10 policies to help build capacity and sustainability for K–12 computer science. When states take action and pass policies, students have more opportunities to benefit from computer science. This report provides updated policy, access, and participation data alongside examples and stories to guide policymakers and advocates in ensuring all students learn computer science.



CALIFORNIA

Ten Policies to Make Computer Science Foundational

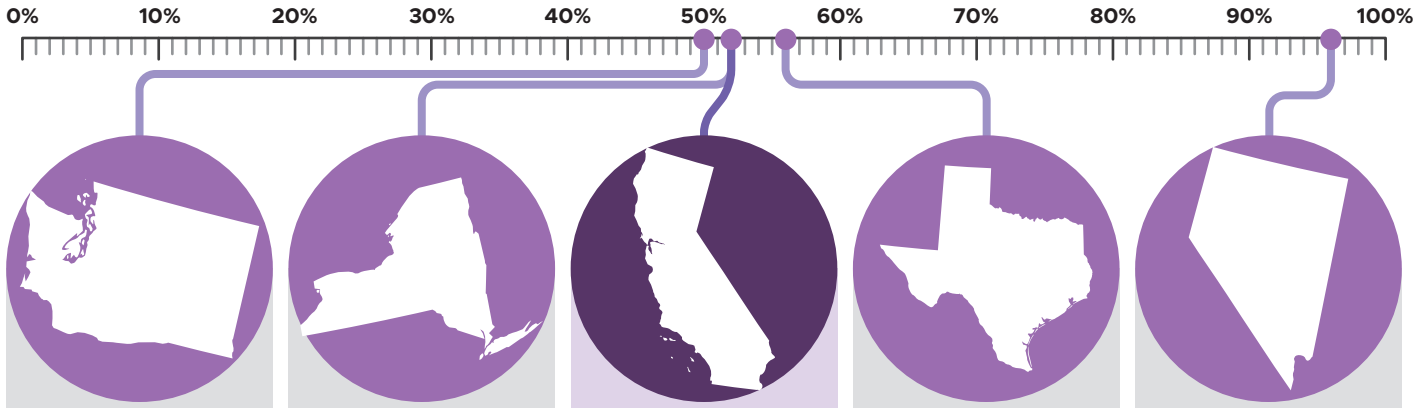
State Plan	Standards	Funding	Certification	Preservice
State CS Position	Require HS to Offer	Can Count	Admissions	Graduation Requirement

Policy Implementation

The California Legislature introduced a bill requiring all high schools to offer computer science, as well as strengthening data reporting of computer science courses, but ultimately this bill did not pass. We strongly encourage the state to pass this legislation in the future, as it would be crucial in addressing the fact that half of California high schools still do not offer a single course.

In July 2024, California held its first ever statewide in-person computer science professional development week with participants from 35 counties. This was funded through a Educator Workforce Investment Grant.

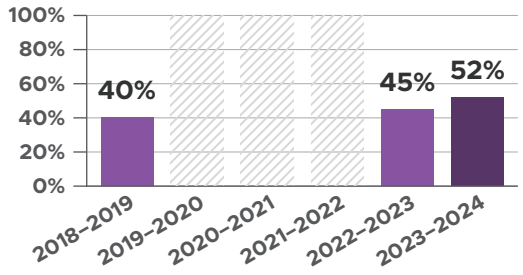
Comparative Access to Computer Science Courses (% of HS offering)



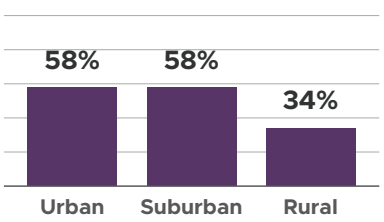
Washington	New York	California	Texas	Nevada
50%	**52%**	**52%**	**56%**	**96%**
✓ State plan	✓ State plan	✓ State plan	✗ State plan	✓ State plan
✓ Funding	✓ Funding	✓ Funding	✓ Funding	✓ Funding
✗ CS required for graduation	✗ CS required for graduation	✗ CS required for graduation	✗ CS required for graduation	✓ CS required for graduation

Percentage of Public High Schools Offering Foundational Computer Science

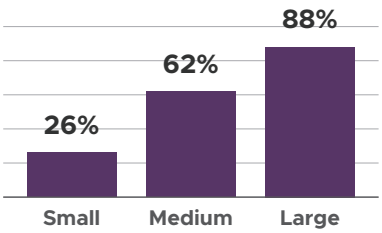
Access by School Year



Access by Geography*



Access by School Size*



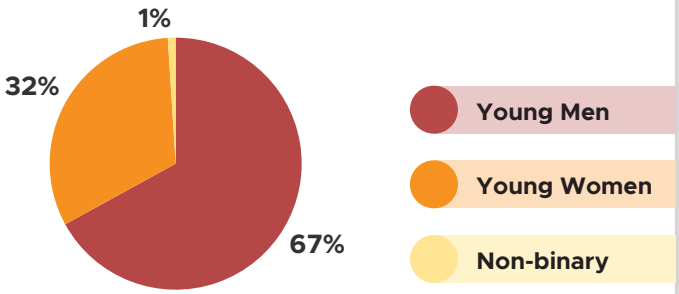
Data is from the most recent data school year 2023–2024

Participation in Foundational High School Computer Science

Participation by School Year

California does not collect enrollment data for all foundational computer science courses. We used AP exam data from the College Board for participation statistics, but we know participation in all foundational computer science courses is broader than just AP. We encourage the state to begin collecting and reporting comprehensive course enrollment data.

Participation by Gender in AP Exams



Student Groups That Reached Parity in AP Exams

We do not have data that indicates there are student groups that have reached parity.

Student Groups That Are Underrepresented in AP Exams

Young women, Black students, Hispanic/Latino students

We lack enough data on Native American students, students with disabilities, English language learners, and economically disadvantaged students to determine representation.

Computer Science Prior to High School

Elementary School Computer Science

Over 300 elementary teachers participated in hands-on professional development workshops in the summer of 2024. Two follow-up sessions will be held during the school year to support these teachers.

Middle School Computer Science

Middle school teachers also attended professional development workshops where they learned how to integrate computer science into their curriculum and teach stand-alone courses.

States ranked by their percentage of offering