



CANDIDATE QUESTIONNAIRE ON COMPUTER SCIENCE

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Position: Governor
Candidate: Gavin Newsom

1. What do you think it will take to meet the growing demand for K-12 computer science education to prepare students for college, careers, and civic engagement? What specific steps would you take to address these needs?

I have been a strong advocate for expanding computer science in schools across California, and equipping our young people with the skills they need to succeed in the jobs of the twenty-first century. This is why I championed legislation that led to the creation of a long-term computer science strategic plan for the state, and called on the University of California (UC) and California State University (CSU) to recognize computer science as a core mathematics or science course.

For a growing number of academic and professional pursuits, computer science provides just as relevant a foundation as algebra. Every student learns about photosynthesis and fractions even if they don't grow up to become botanists or mathematicians. Similarly, California's children deserve the option to learn what an algorithm is and how the Internet works.

One of the barriers preventing more schools from offering computer science, and therefore more students from taking it, is the UC and CSU's failure to recognize computer science as a core mathematics or science course, but rather as an elective. To rectify this issue, I spearheaded a letter signed by dozens of key political, business and nonprofit leaders to the Board of Admissions and Relations with Schools (BOARS), the UC committee armed with the ability to reclassify the course.

As a member of a task force established by the California State University Academic Senate, I successfully lobbied for inclusion of computer science in the final report, moving the CSU one step closer to recognizing computer science as a viable option for a high school mathematics course.

I hope to be afforded the opportunity as Governor to continue this work until we achieve "Computer Science for All".

2. How can the state ensure that opportunities to learn computer science are available to all students in California, especially those in under-resourced schools that serve Latinx, African American, Native American and other students of color, students with special needs, English Learners and others underrepresented in computer science?

California is the tech capital of the world, but we've failed to align our education system to meet this economic opportunity. The state is home to over 68,000 open computing jobs with an average salary over \$100,000 that we can't fill with California public school graduates. Meanwhile, only a quarter of California's high schools offer computer science. And sadly, that disparity is punctuated by striking gender and racial gaps. Of the 10,244 California high school students who took the AP Computer Science exam in 2016, only 27% were female. Only 1,487 were Hispanic or Latino and only 146 were black. That is unacceptable. We have a lot of work to do to make sure every student in every school has equal access to computer science and the opportunities it opens. "Computer Science for All" is an economic and equity imperative. Arkansas is well on its way to requiring computer science courses in all high schools. California should be leading the way with them.

3. In what educational programs and infrastructure areas do you think the state should invest to support full access to computer science education, for example, supporting teacher professional development and capacity building to provide a high quality education? Please be as specific as possible.

In partnership with former Assemblywoman Susan Bonilla, TechNet and others, we ensured that the task force established to develop a Computer Science Strategic Implementation Plan would have to address all of the pieces inherent in achieving "Computer Science for All" -- from teacher credentialing to professional development to broadband infrastructure.

Our state faces an acute teaching shortage, particularly in special education, bilingual education and STEM. A full 80% of California's school districts reported experiencing a teacher shortage last year. While this is a widespread problem, I understand that California communities with greater proportions of students of color and students living in poverty have been especially impacted by both shortages and high rates of teacher turnover.

As Governor, I will partner with the appropriate stakeholders to establish a Computer Science teaching credential, develop and encourage state and local incentives to attract highly qualified candidates into the profession, and will improve educational outcomes and teacher retention by investing in teachers as the professionals they are.

As Governor, I will also lead the movement to make universal access to high-speed broadband a reality for every Californian in order to close the digital divide and provide the infrastructure necessary to achieve our shared goal.

4. How do you plan to respond to recommendations provided by the state's Computer Science Strategic Implementation Plan Panel which includes members appointed by or designated by Governor Brown, State Board of Education President Kirst, State Superintendent of Public Instruction Torlakson, the Senate Committee on Rules, and the Speaker of the Assembly? The strategic plan may

include recommendations on teacher preparation, capacity building and credentialing pathways, computer science standards, access to hardware and software and other plans to scale up computer science education coursework so that all high schools teach at least one computer science course.

As mentioned earlier, I fought hard for the creation of the state's Computer Science Strategic Implementation Plan Panel. California has taken this step toward expanding computer science education and taps into an industry of prosperity and upward social mobility where, for the first time, the state has a plan to ensure that students of all backgrounds can participate in a modern workforce where advanced computing skills are in high demand. I am committed to working with members of the panel, and the state's educational community, to advance these policy ideas.

5. In the context of significant budgetary challenges facing California's schools, how will you ensure equity and access to K12 computer science education? What specific actions will you take to ensure computer science education gets the resources that it needs?

"Computer Science for All" is a key priority for me and I am committed to identifying the resources to realize it. Last year, I worked to ensure that the 2017-18 state budget included \$224,000 to fund the Computer Science Strategic Implementation Plan and \$290,000 to fund the development of computer science content standards. As Governor, I will continue to prioritize funding for this critical initiative, and partner with philanthropy and the private sector to supplement these efforts.