Program Description 2015  Rev December 17, 2014

Technology Education and Literacy in Schools (tealsk12.org) helps high schools start and grow a sustainable Computer Science (CS) program and build CS teacher capacity by integrating professional software engineers into the classroom in a co-teaching model with a classroom teacher. Within 2 years, committed partner schools can independently sustain CS courses with curricula designed by UC Berkeley and University of Washington. TEALS is a Microsoft YouthSpark Program with a proven track record that drives industry-wide participation in bringing rigorous computer science courses to high schools across the country.

The High School Computer Science Gap
CS is one of the most rewarding and challenging undergraduate degrees a college student can earn. Despite high demand from the technology industry, each year only 2.4% of college students graduate from American colleges with a CS degree\(^1\). The problem starts at the high school level where only 0.92% of AP tests taken are in CS\(^2\). Schools cannot compete financially with industry for the limited CS talent which means they are unable to offer CS courses, perpetuating a cycle of teacher shortages, lack of awareness and low enrollment.

TEALS Track Record
For the current 2014-15 school year, TEALS supports 131 high schools in 19 states, with a reach of approximately 7,000 students (~40% AP CS) and 480 volunteers from hundreds of companies across the tech sector. TEALS believes in providing access to CS education to students in urban, suburban, and rural areas alike. 25% of TEALS students are female (2X industry average) and 24% are Underrepresented Minorities (5X industry average). Since 2009, TEALS has helped numerous schools build sustainable CS programs, and seeks to ensure that every high school student in the US will have the opportunity to take CS at the school they attend.

The TEALS Model
TEALS recruits, trains, and mentors high tech professionals to teach 1st period Computer Science classes at local schools in partnership with a classroom teacher. Eventually the classroom teacher will teach the CS class on their own.

Course Offerings
Introduction to Computer Science Principles
Based on the award winning UC Berkeley CS10 course, and adapted specifically for high school in conjunction with UC Berkeley.

AP Computer Science A (Java Programming)
Based on the University of Washington’s intro course for CS majors, CSE142.

Simplified Program Timeline
November – February: Partner schools selected. Schools sign partnership agreement.
February – April: TEALS and schools recruit volunteers from local technology companies.
May – June: TEALS and school partners interview and place volunteer candidates.
June – August: TEALS runs a volunteer summer training program with focus in curriculum, pedagogy, practical teaching strategies, and classroom management. Teaching teams meet and work together to define the class.
September – June: TEALS and schools provide ongoing mentorship, evaluation and support of teachers and classes.

TEALS requires partner schools to provide a travel stipend for the TEALS volunteers. This stipend ties the school and the TEALS volunteers together for the school year and indicates commitment from both.

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\(^1\) http://code.org/stats

\(^2\) http://research.collegeboard.org/programs/ap/data/participation/ap-2014