

## Code.org 2025 Goals

 Transforming Clobal Computer Science Education
# Transforming Global Computer Science Education 

At Code.org, our long-term mission is for every student in every school to have the opportunity to learn computer science. We imagine a world in which computer science (CS) is a fundamental part of the education system.

Our vision will be fulfilled when every school teaches computer science and every student learns the foundational basics. This will take decades to achieve, and we have committed to tracking our progress in this audacious effort.

Code.org is data-driven by nature; we measure our progress not just to report to external stakeholders but because it is core to our DNA to set quantitative goals that inform our strategies and tactics.

While we strive to reach "every" student, we make an extra effort to reach student groups who are underrepresented in CS. We measure our success in broadening participation among these groups to ensure we are closing gaps and increasing opportunity concretely.

The goals described below are our internal, optimistic measures of potential success in increasing access to CS globally. We choose to stretch ourselves, knowing that by setting a high bar for achievement, our mission-driven team, with the support of our partners, works to reach even higher. We extrapolated from past data, analyzed our anticipated organizational growth, and added the intangible but much-needed ingredients of ambition and hope.

We share these goals to give you a sense of our approach to self-measurement and evaluation; transparency is a Code.org core value.

## Code.org 2025 Goals

All goals below are for the end of the calendar year 2025. Unless specified as "all-time," the metrics are measured based on activity during a fiscal year (January 1 - December 31) or school year (typically September - June) rather than cumulatively. 2020 outcomes related to students and schools are calculated from the 2019-2020 school year.

## 01. Computer Science Movement Goals

To reach every student in every school takes a widespread movement, and Code.org measures the annual progress of that movement-from rigorously counting the actual number of schools in the US that offer computer science courses to analyzing state policies to identify support for computer science. Code.org examines multiple data sources, including course enrollment, AP exam participation and performance, and state and national policy language.

School districts, state education agencies, and other organizations in the computer science community look to Code.org, as a leader of the computer science movement, to set an example through action and report on the progress the community is making towards broadening access and participation in computer science.

2025 Goal
2020 Outcome

| Percentage of US public high <br> schools that teach CS <br> (State of CS Report) | $80 \%$ | $47 \%$ |
| :---: | :---: | :---: |
| US AP CS exams taken | 350,000 <br> (35\% Female, 28\% URG) | (31\% Female, 21\% URG) |
| States that have established an "all <br> schools must offer" policy OR <br> state CS plans + CS funding | 50 | 25 |
| Countries that have established <br> plans for CS | 85 | 53 |

## 02. Code.org "Bottom Line" Goals

These specific targets represent ambitious progress towards increasing access, participation, and performance in computer science between 2020 and 2025; achieving them will require significant efforts by Code.org. These goals also represent a dedication to diversity in computer science in terms of socioeconomic status, race, ethnicity, gender, and geography. Access and participation are measured by the number of schools teaching Code.org CS courses, Code.org accounts, and the demographics of students participating in the courses and on the Code.org platform, from primary to secondary school. Performance is measured by students passing exams or demonstrating basic coding proficiency using the Code.org platform.

## U.S. Schools

2025 Goal 2020 Outcome

| U.S. schools that teach ${ }^{1}$ Code.org course | 43,000 | 31,009 |
| :---: | :---: | :---: |
| High needs ${ }^{2}$ | 18,000 | 13,290 |
| High URG ${ }^{3}$ | 13,000 | 9,520 |
| Rural ${ }^{4}$ | 13,500 | 9,635 |
| U.S. schools that teach Code.org AP CSA | 1,650 | 0 |
| High needs | 660 | 0 |
| High URG | 630 | 0 |
| Rural | 575 | 0 |
| U.S. schools that teach Code.org AP CSP | 5,000 | 2,471 |
| High needs | 2,000 | 914 |
| High URG | 1,750 | 815 |
| Rural | 1,750 | 717 |

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## U.S. Schools (continued)

2025 Goal 2020 Outcome

| U.S. schools teach Code.org CSP ${ }^{5}$ | 8,400 | 5,019 |
| :---: | :---: | :---: |
| High needs | 3,300 | 1,779 |
| High URG | 2,900 | 1,602 |
| Rural | 2,900 | 1,548 |
| U.S. schools teach Code.org CSD | 15,000 | 7,500 |
| High needs | 6,750 | 3,226 |
| High URG | 5,400 | 2,442 |
| Rural | 5,500 | 2,602 |
| U.S. schools teach Code.org CSF | 34,000 | 24,986 |
| High needs | 15,000 | 11,008 |
| High URG | 12,000 | 7,660 |
| Rural | 10,000 | 7,517 |

## U.S. Students ${ }^{6}$

(URG goals are set in aggregate, but future Code.org reports will be disaggregated by race)

2025 Goal 2020 Outcome

| All-time student accounts on Code.org | 100,000,000 | $\mathbf{5 5 , 0 0 0 , 0 0 0}$ |
| ---: | ---: | ---: |
| 365-day active | $30,000,000$ | $14,593,653$ |
| \% Female | $47 \%$ | $45 \%$ |
| Rural | 13,500 | 9,635 |
| Code.org students that take ${ }^{7}$ AP CSA exam | $\mathbf{3 0 , 0 0 0}$ | $\mathbf{0}$ |
| Female | 9,000 | 0 |
| Rural | 6,000 | 0 |
| Code.org students that pass ${ }^{\mathbf{8}}$ AP CSA exam | $\mathbf{1 9 , 5 0 0}$ | $\mathbf{0}$ |
| Female | 5,900 | 0 |
| Rural | 3,400 | 0 |

${ }^{5}$ Code.org CSP - Taught as a non-AP course, as opposed to AP CSP
${ }^{6}$ Student enrollment goals are measured for the school year 2024-25.
${ }^{7}$ Take AP exam - Number of students with AP results at schools that declared they were teaching Code.org curriculum as reported by College Board
${ }^{8}$ Pass AP exam - \# of students with Score of 3 or higher (out of 5) from the set of students who "take" exam as reported by the College Board

## U.S. Students (continued)

2025 Goal 2020 Outcome

| Code.org students that take AP CSP exam | 100,000 | 46,535 |
| :---: | :---: | :---: |
| Female | 40,000 | 16,556 |
| Rural | 35,000 | 12,624 |
| Code.org students pass AP CSP exam | 70,000 | 33,471 |
| Female | 28,000 | 12,560 |
| URG | 19,000 | 7,554 |
| Code.org students start CSA | 100,000 | 0 |
| Female | 30,000 | 0 |
| URG | 25,000 | 0 |
| Code.org students start ${ }^{8} \mathrm{CSP}$ | 400,000 | 239,878 |
| Female | 160,000 | 87,037 |
| URG | 172,000 | 101,618 |
| Code.org students start CSD | 2,000,000 | 732,924 |
| Female | 900,000 | 294,777 |
| URG | 900,000 | 357,641 |
| Code.org (US) students start a CSF course | 5,000,000 | 4,310,000 |
| \% Female | 47\% | 46\% |
| Code.org students all-time reach CSF basic coding proficiency | 8,500,000 | 5,300,000 |
| \% Female | 45\% | 43\% |

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## 03. Code.org International Goals

With 1.7 billion students around the globe, scaling outside of the United States represents the primary source of growth and impact for Code.org. In 2019, we created a three-year plan to serve more international students than in previous years. This plan has four strategies:

1. Enhance CS curricula availability to international students and teachers in a way that is equitable and locally relevant.
2. Drive awareness and generate demand for CS education globally by reaching and inspiring parents, teachers, and students so that more children and young people can learn computer science.
3. Help drive systemic change in education through our international partner network by amplifying and supporting local efforts to persuade policymakers to include CS as part of the curriculum.
4. Help international partners to build the capacity of teachers by enabling them to deliver localized professional development programs.

As a result of this work, we now benefit more students and teachers, reach more markets, and make more localized content available on our platform. We are completing the localization of our curriculum for primary education to 30 languages that are considered official in over 150 countries. Still, we now need to strengthen our distribution channels to drive more penetration by evolving the capabilities of our platform.

There are already over 70 countries with varying degrees of progress, including CS as part of the curriculum for primary education, secondary education, or both. As we partner with those governments and other organizations to bring CS into the classrooms, we prioritize developing professional learning models to drive a more scalable and sustainable impact globally.

| Total all-time accounts are from |
| ---: | :---: | :---: |
| outside the US |$\quad$ 2025 Goal $\quad$ 2020 Outcome

## 04. Code.org Diversity Goals

The following goals represent a critical approach to Code.org's work in closing gaps in access among URG and female students. Specifically, we are working to increase and maintain the categories below to match or exceed the over representation percentage within schools.

The specific percentages below are diversity benchmarks that computer science education has never attained at this scale, exemplifying Code.org's commitment to diversity.

Code.org Classroom Diversity goal: \% URG in classroom matches \% URG in the school

|  | 2025 Goal | 2020 Outcome |
| :---: | :---: | :---: |
| CSP \% URG in classroom matches \% URG in the school | >=0\% difference | +0.9\% |
| CSD \% URG in classroom matches \% URG in the school | >=0\% difference | +3.9\% |
| Code.org AP CSP exam \% female | 40\% | 36\% |
| Code.org AP CSA exam \% female | 30\% | 25\% |
| Code.org AP CSP exam \% URG | 35\% | 30\% |
| Code.org AP CSA exam \% URG | 20\% | 17\% |
| CSP \% female | 40\% | 34\% |
| CSA \% female | 30\% | 0\% |
| CSP \% URG | 43\% | 42\% |
| CSA \% URG | 25\% | 0\% |
| CSD \% female | 45\% | 40\% |
| CSD \% URG | 45\% | 49\% |
| CSF \% female | 50\% | 46\% |

## Methodology: How did we choose these metrics?

Our Research, Evaluation and Data (RED) team extrapolated trends from past data to begin goal-setting. Although our programs and courses were only a few years old, we had collected a robust enough data set on which to predict future growth. In addition to looking at past trends, we also considered external factors such as the landscape of government policy, which we expect to accelerate past trends (resulting from Code.org's ongoing work in advocating for policies that require and fund schools to teach computer science).

Lastly, we balanced a mix of optimism and healthy realism to set ambitious goals to inspire and motivate us to outperform our past, yet not so lofty that they seem impossible to achieve.

Code.org established these numbers during the pandemic, with limited knowledge about the impact on the education landscape. Although we haven't subsequently adjusted our numbers, we recognize that the shocks of a global pandemic have made our goals harder to achieve in the short term.

For every single number in the tables above, the RED team created a chart such as the one below, so we can visualize and estimate future metrics based on past trends and then overlay our best judgment to arrive at a final goal.

# CSP + CSA Exam Takers - Linear Projection 



For example, looking at the chart above, the combined AP exam participation is trending to 330,000 by 2025. Yet, we set our goal ambitiously to 350,000, betting that we can accelerate the growth of CS. Considering that AP CS Principles is already the fastest-growing course in the history of the College Board AP program, this is an excellent example of our ambition.

## The Power of Partnership

There is a story about the students and teachers we serve behind each of these numbers. We hope that by sharing our aspirations with you, we will inspire you to take this journey with us.

## Glossary

- AP - Advanced Placement: Program created by the College Board, which offers college-level courses and exams to high school students.
- AP CSA - AP Computer Science A: An introductory college-level computer science course focusing on computer programming in java. The curriculum covers the content defined in the AP CSA framework and prepares students for the AP exam. It maps to a standard introductory class for Computer Science majors.
- AP CSP - AP Computer Science Principles: A full-year, rigorous, introductory college-level computing course that introduces students to a broad set of topics in computer science. CSP maps to a standard course in computer science for non-majors
- CS - Computer Science
- CSA - Computer Science A. A reference to the course content of AP CSA (see above). Many schools choose to teach similar content but not prepare students explicitly for the AP exam.
- CSD - Computer Science Discoveries: Introductory computer science course for grades 6-10 that empowers students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem-solving, and fun.
- CSF - Computer Science Fundamentals: This Code.org curriculum is designed for students in kindergarten through fifth grade (K-5), which blends online and "unplugged" non-computer activities to teach students computational thinking, problem-solving, programming concepts, and digital citizenship.
- CSP - Computer Science Principles: A reference to the course content of AP CSP (see above). Many schools teach similar content as an introductory course but do not prepare students explicitly for the AP exam.
- CSTA - Computer Science Teachers Association: Professional association whose mission is to support, engage, and advocate for K-12 computer science teachers worldwide.
- ES - Elementary School
- HoC - Hour of Code: Global movement designed to demystify "code," to show that anybody can learn the basics, and to broaden participation in the field of computer science, starting with 1-hour coding activities but expanding to all sorts of community efforts worldwide.
- HS - High School
- MS - Middle School
- URG - Underrepresented Racial/Ethnic Groups: Refers to students from marginalized racial/ethnic groups underrepresented in computer science, including students who are Black/African American, Hispanic/Latino/Latina/Latinx, Native American/Alaskan, and Native Hawaiian/Pacific Islander framework and prepare students for the exam.


[^0]:    ${ }^{1}$ Schools that teach - Number of schools with a teacher who meets the "course started" metric (section of 5+ students who started)
    ${ }^{2}$ High needs - Schools where more than $50 \%$ of the students qualify for free-and-reduced meals
    ${ }^{3}$ High URG - Schools where more than $50 \%$ of the school population are members of racial and ethnic groups that are historically underrepresented in computer science: Black, Hispanic/Latinx, Native American, Pacific Islander
    ${ }^{4}$ Rural - Schools whose "community type" as defined by the National Center for Education Statistics is Rural (any subcategory), Town-distant, or Town-remote

[^1]:    ${ }^{8}$ Start - Number of students who visit at least a single activity in any of the official CSF/CSD/CSP courses on the platform, regardless of whether or not that student is in a teacher's section of 5 or more students

