Welcome!

Presenting today:

Maureen Reyes, Executive Director, AP Program Management
Today’s Agenda

• Development of AP CSP
• Largest AP® Course Launch
• Course and Exam Details
• Bring AP CSP to Your School
• Q&A
Goals

• Make computer science more engaging and accessible
• Reach students underrepresented in computer science
• Better prepare students for the job market of today and tomorrow

A Collaborative Process

• Partnership with the National Science Foundation since 2008
• Educators from over 50 leading high schools and higher education institutions piloted the course
• Over 350 colleges and universities have indicated that they will create policies to grant credit and/or placement for the exam
Ever-Increasing Workforce Demand

About half a million jobs in computer and information technology will be added by 2024. That’s a 12% growth in the tech industry, faster than the average for all occupations.

A Computer Science Background Improves Earning Potential

A computer science major can earn 40% more than the average college student.

Source: Code.org
The largest course launch in AP’s 60-year history
AP CSP continued to grow in school-year 2017-18

- 50 STATES
- 3,500 SCHOOLS
- 4,100 TEACHERS
- 77,600 STUDENTS
AP Computer Science participation increased 135% since the launch of AP CSP in 2017.

Note: 2007-2016 includes AP CSA exams; 2017-2018 includes AP CSA and AP CSP exams.
Number of Black or African American students taking an AP Computer Science exam increased by 265% since the launch of AP CSP.
Number of Hispanic or Latino students taking an AP Computer Science exam increased by 228% since the launch of AP CSP.
Number of female students taking an AP Computer Science exam increased by 183% since the launch of AP CSP.
AP Computer Science participation

Number of rural students taking an AP Computer Science exam increased by 190% since the launch of AP CSP.
Student Enthusiasm on AP CSP

“The collaborative and exploration aspect of the curriculum helped me to create a atmosphere in which the students were truly interested and excited to learn.”

“Student enthusiasm ... they loved AP CSP! Several said it was the best class they had ever taken.”

“One of the aspects that went well this year is the student engagement. ... I was very surprised when some of them said it was their favorite class, and it was from students I did not expect.”

“Student engagement and interest in the subject matter was amazing.”
Course and Exam Details
About the Course

AP Computer Science Principles offers a multidisciplinary approach, focusing on the creative aspects of programming.

Students will learn:

• Creative problem solving
• How to apply computational processes to analyze large data sets
• Programming
• How the internet works and important cyber security issues
• Impacts of computing innovations

“It is an exploratory class that my students say is the best part of their day. They have shown creativity, ingenuity, and a collegiality collaboration I have not had in other courses I’ve taught.”

— Becky Byer, AP Computer Science Principles Teacher from Wyoming
## 2 AP Computer Science Courses

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<tr>
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<th>Computer Science A</th>
<th>Computer Science Principles</th>
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<tbody>
<tr>
<td><strong>Curricular Focus</strong></td>
<td>Problem solving and object-orientated programming</td>
<td>Big ideas of computer science (including programming)</td>
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<tr>
<td><strong>Programming Language</strong></td>
<td>Java</td>
<td>Teachers choose</td>
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<td><strong>Assessment Experience</strong></td>
<td>• Multiple-choice and free-response questions</td>
<td>• Multiple-choice exam</td>
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<td>• Two performance tasks administered by the teacher, and students submit digital artifacts</td>
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Curriculum Framework: Seven Big Ideas

Big Ideas
1. Creativity
2. Abstraction
3. Data and Information
4. Algorithms
5. Programming
6. The Internet
7. Global Impact
There are AP CSP endorsed providers, offering AP CSP resources and professional development across the country.

- Beauty and Joy of Computing
- CodeCombat
- CodeHS
- Code.org
- CS Matters
- CS50
- EMC School
- Mobile CSP
- Project Lead The Way
- UTeach
### A New Approach to AP Assessment

#### Through-Course Assessment (Weight = 40%)

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<th>Performance Task</th>
<th>Individual Weight</th>
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<tr>
<td>Explore: Implications of Computing Innovations</td>
<td>16%</td>
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<tr>
<td>Create: Applications from Ideas</td>
<td>24%</td>
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#### End-of-Course AP Exam (Weight = 60%)

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<th>Item Type</th>
<th>Number</th>
<th>Timing</th>
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<tr>
<td>Multiple Choice (Single- and multiple-select)</td>
<td>74 questions</td>
<td>120 minutes</td>
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Bring AP CSP to Your School
1. Explore Endorsed Providers

2. Add Course and Recruit Teachers—teachers in disciplines other than CS can teach this course

3. Check Recommended Classroom Resources—make sure your school/classroom aligns with course recommendations

4. Recruit Students—especially those underrepresented in computer science

5. Submit Course Audit Info—Deadline: January 2019

6. Stay Connected—sign up at collegeboard.org/CSPinterest
Support for Teachers of All Levels of CS Experience

PD by Endorsed Providers
• Offers a full ready-to-use CSP curriculum, including lessons, unit plans, activities, and robust teacher PD (online and face-to-face)

AP Summer Institutes
• 70 weeklong professional development sessions

AP One-Day Workshops
• Available now for new and experienced Computer Science teachers collegeboard.org/cspworkshop
1. State certification requirements

2. Any teacher passionate about learning computer science, can learn to teach AP CSP.

3. Background of Teachers:
   - Art/Music
   - Business
   - English/Language Arts
   - Engineering
   - Computer Science/Technology
   - History
   - Mathematics
   - Science
   - Social Science

4. Administrative support is essential:
   - Multiple teachers in the same school to allow for collaboration and teaming
Online Courses on CSP Content and Instruction
• Developed by Harvard University, University of California at Berkeley, Trinity College, Edhesive, and more

Teacher Partner Instruction
• TEALS—teachers work in partnership with volunteers to teach CS and build the CS program

AP CSP Teacher Community
• Access Curriculum Resources, Instructional Resources, Lesson Plans, and more
Required Classroom Resources

• Ensure that each student has:
  • Access to course materials
  • Individual access to a computer (i.e., one student per computer) for an adequate time to complete course activities
  • Access to the internet as well as to the tools and programming environments used in the course

• Ideally, students have access to support multimedia explorations such as 3D graphics and sound.
AP CSP Toolkit

collegeboard.org/cspresources

**Bringing AP Computer Science Principles to Your School**

Whether you’re teaching AP Computer Science Principles, AP Computer Science A, or AP Computer Science Principles, the toolkit from College Board offers you resources to help you bring this course to your school.

**ADD THE COURSE, AND IDENTIFY AND RECRUIT TEACHERS**

Once you’ve decided to offer AP Computer Science Principles, you’re ready to begin the process of finding and recruiting teachers who are passionate about the course.

**EXPLORE CURRICULUM OPTIONS**

Use AP Computer Science Principles as the basis for your curriculum. You can choose from a variety of modules to fit your school’s needs.

**EMAIL AND PRESENTATION TEMPLATES**

If you need help with email templates or presentations to share with your school or community, we’ve got you covered.

**BANNER ADS**

Promote your AP Computer Science Principles course with eye-catching banner ads.

- **Student Testimonial Videos**
- **Best Practices for Implementation**
- **Recruitment Strategies for Diverse Class**
- **Brochures for Students and Parents**
- **Posters**
- **Email and Presentation Templates**
- **Banner Ads**
More questions?

Web: collegeboard.org/APCSP
Email: APCSP@collegeboard.org