Computer Science Principles

Why Computer Science? Every 21st century student should have the opportunity to learn computer science (CS). The basics of CS help nurture creativity and problem-solving skills, and prepare students for a future in any field or career.

Advanced Placement Computer Science for All Students!

Code.org's Computer Science Principles (CSP) is an introductory Advanced Placement (AP®) course designed to broaden participation in computer science. Code.org is recognized by the College Board as an endorsed provider of AP® CSP curriculum and professional development. The course has been reviewed by the College Board and is pre-approved to pass the course audit process. Our endorsed professional development is held to (and goes beyond) the standards of AP® Summer Institutes. The official AP® exam launches this 2016-17 school year.

Engaging Curriculum

Our team designed the AP® CSP curriculum to support students and teachers new to the discipline. The curriculum includes daily lesson plans made up of inquiry-based activities, videos, assessments, and computing tools, allowing teachers to guide and learn alongside students as they discover core computing concepts.

One-Year Professional Learning Program

Summer: Teachers attend a 5-day in-person workshop designed to introduce the CS concepts from the curriculum, AP® elements of the course, and core teaching practices. (Travel may be required.)

School Year: Teachers continue with job-embedded workshops and online modules focused on supporting their first year of implementation.

Hundreds of teachers have participated. The majority say, "It's the best professional development I've ever attended."

"Hands-down the best PD I've ever been to. This week modeled the equity that we will bring to our CSP classrooms."

"Pretty much every student wants to take the next CS courses we'll offer. "

Curriculum Features:

- Daily instructional lesson plans that include inquiry/equity-based pedagogy and background content

- Formative and summative assessments, project exemplars and rubrics

- Widgets and simulators for exploring computing concepts like text compression and the internet

- Concept and tutorial videos for students, and teaching tips-and-tricks videos for teachers

- Code Studio — a learning platform where students interact with lesson materials and tools, and where teachers access a dashboard to see student work and progress

- App Lab — a JavaScript programming environment in Code Studio, designed for creating event-driven web apps with block-to-text workspace and debugging

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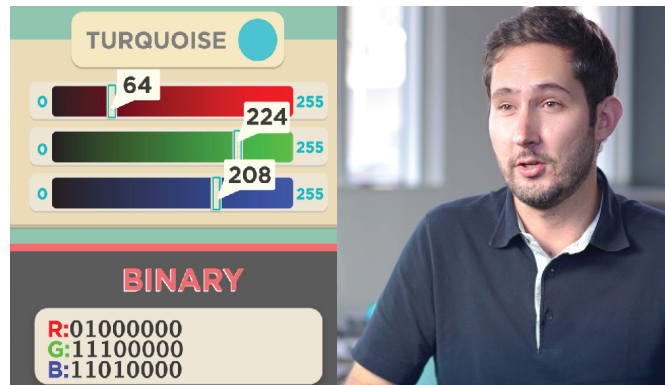
CSP Unit Overview

Unit 1: The Internet	Learn how the multi-layered systems of the Internet function as you collaboratively solve problems and puzzles about encoding and transmitting data, both 'unplugged' and using Code.org's Internet Simulator.
Unit 2: Digital Information	Use a variety of digital tools to look at, generate, clean, and manipulate data to explore the relationship between information and data. Create and use visualizations to identify patterns and trends.
Unit 3: Algorithms and Programming	Learn to program in the JavaScript language with turtle programming in Code.org's App Lab. Learn general principles of algorithms and program design that are applicable to any programming language.
Unit 4: Big Data and Privacy	Research current events around the complex questions related to public policy, law, ethics and societal impact. Learn the basics of how and why modern encryption works.
Unit 5: Building Apps	Continue learning how to program in the JavaScript language. Use Code.org's App Lab environment to create a series of applications that live on the web. Each app highlights a core concept of programming.
Unit 6: Performance Tasks	Design a project plan, then work on and complete your AP® Performance Task projects for submission to the College Board.

Apply now for professional learning!
http://code.org/csp/pd

For curriculum, videos, and support documents, visit:
http://code.org/csp

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