

AP® Computer Science Principles Syllabus and Overview

Course Overview

Code.org's Computer Science Principles (CSP) curriculum is a full-year, rigorous, entry-level course that introduces high school students to the foundations of modern computing. The course covers a broad range of foundational topics such as programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing. All teacher and student materials are provided for free online and can be accessed at code.org/csp.

AP Endorsed

Code.org is recognized by the College Board as an endorsed provider of curriculum and professional development for AP® Computer Science Principles (AP CSP). This endorsement affirms that all components of Code.org CSP's offerings are aligned to the AP Curriculum Framework standards, the AP CSP assessment, and the AP framework for professional development.

Curriculum At-a-Glance

The curriculum is divided into roughly 120 daily lesson plans which comprise 10 units of study.

Unit	Description
Unit 1: Digital Information	Explore how computers store complex information like numbers, text, images and sound and debate the impacts of digitizing information.
Unit 2: The Internet	Learn about how the Internet works and discuss its impacts on politics, culture, and the economy.
Unit 3: Intro to App Design	Design your first app while learning both fundamental programming concepts and collaborative software development processes.
Unit 4: Variables, Conditionals, and Functions	Expand the types of apps you can create by adding the ability to store information, make decisions, and better organize code.
Unit 5: Data	Explore and visualize datasets from a wide variety of topics as you hunt for patterns and try to learn more about the world

Unit	Description
	around you.
Unit 6: Lists, Loops, and Traversals	Build apps that use large amounts of information and pull in data from the web to create a wider variety of apps.
Unit 7: Parameters, Return, and Libraries	Learn how to design clean and reusable code that you can share with a single classmate or the entire world.
Unit 8: Cybersecurity and Global Impacts	Research and debate current events at the intersection of data, public policy, law, ethics, and societal impact.
Unit 9: Create PT Prep	Practice and complete the Create Performance Task (PT).
Unit 10: Algorithms	Design and analyze algorithms to understand how they work and why some are considered better than others.

Course Requirements & Expectations

- Digital Portfolio Requirement:** Students will be required to maintain an individual digital portfolio throughout the course. This portfolio will showcase ongoing classwork, reflections, coding artifacts, computational artifacts, and progress toward the AP Create Performance Task. Students will have a required daily entry in their “Tech Today” section of their portfolio to keep track of their daily progress.

Our Vision & Classroom Pedagogy

Code.org's vision is that every student in every school should have the opportunity to learn computer science. Our curriculum is designed so that an empowered teacher can lead a diverse group of students through experiences that are supportive, equitable, engaging, and lead to valuable learning. We emphasize:

- Free and open resources and accessible programming environments.
- Equitable pedagogy supporting students of all backgrounds and skill levels.
- Collaborative problem-solving, pair programming, and peer review.
- Real-world impacts and creative expression through computing innovations.

Provided Materials & Technical Requirements

The course requires daily access to an Internet-connected computer (1:1 computer setup) to access lesson plans, activity guides, widgets, the Internet Simulator, and Code.org's App Lab environment. Additional classroom supplies

include student journals, poster paper, markers, and post-it notes.

Covering the AP CSP Conceptual Framework

The CS Principles Conceptual Framework outlines five Big Ideas: Creative Development (CRD), Data (DAT), Algorithms and Programming (AAP), Computing Systems and Networks (CSN), and Impact of Computing (IOC). Throughout the course, students employ six Computational Thinking Practices to design, analyze, and refine computational solutions.

Explore Curricular Requirement

Students complete the Explore Curricular Requirements in Unit 8 (Cybersecurity and Global Impacts) through the Innovation Simulation project, investigating computing innovations, explaining their beneficial and harmful societal effects, analyzing data consumption/transformation, and addressing data privacy and security concerns.

Syllabus Acknowledgment & Signature

Please review this syllabus with your parent or guardian. Sign and return this section to confirm that you have read and agreed to the course expectations, policies, and requirements.

Student Name (Printed)	Date
Student Signature	Date
Parent/Guardian Name (Printed)	Date
Parent/Guardian Signature	Date