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

What is Computer Science Discoveries?

Computer Science Discoveries (CS Discoveries) is an introductory computer science course that empowers students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem solving, and fun.

K-12 curriculum pathway

CS Discoveries fits naturally between our CS Fundamentals course (for K-6th grade) and our AP/Honors CS Principles course (for high school). This allows districts, teachers, and students to complete a K-12 pathway of CS courses that build on each other and cohesively flow together.

Flexible implementation

We built the CS Discoveries curriculum for students in grades 7-9, so teachers can implement in either middle school or high school classrooms. The two semesters spiral upon each other, allowing the course to be taught as a single semester (Units 1-3), two sequential semesters, a full-year course, or even integrated into existing technology classes.

Designed for equity

By providing students opportunities to engage with culturally and personally relevant topics in a wide variety of CS related fields, we hope to show all students that CS can be for them. That’s why we designed this course from the ground up to be accessible and engaging for all students, regardless of background or prior experience.

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Professional Learning Program

Teachers implementing CS Discoveries as a semester or full-year course can apply to participate in a one-year professional learning program. The program involves:

- **Summer:** Teachers attend a 5-day in-person, conference style workshop designed to introduce CS concepts from the curriculum 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.

Curriculum features:

- Daily instructional lesson plans that include inquiry- and equity-based pedagogy and background content
- Formative and summative assessments, exemplars and rubrics
- Videos for students and teachers including concept tutorials, instructional guides, and lesson tips
- Code Studio, a learning platform that organizes lesson plans and activities with student and teacher dashboards
CS Discoveries unit overview

Semester 1: Exploration and Expression

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Problem Solving</th>
<th>Explore the problem-solving process and the different ways humans and computers solve problems.</th>
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<tbody>
<tr>
<td>Unit 2</td>
<td>Web Development</td>
<td>Discover the languages powering the web. Build your own websites in HTML and CSS using Web Lab.</td>
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<tr>
<td>Unit 3</td>
<td>Animations and Games</td>
<td>Learn the powerful constructs underlying programming languages. Build interactive animations and games in JavaScript using Game Lab.</td>
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Semester 2: Innovation and Impact

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<tr>
<th>Unit 4</th>
<th>The Design Process</th>
<th>Follow a design process to identify and empathize with problems faced by a target audience. Prototype an app to help solve that problem using App Lab.</th>
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<tr>
<td>Unit 5</td>
<td>Data and Society</td>
<td>Learn how information is represented, collected, analyzed, and visualized by computers. Investigate how data is collected online and weigh the potential benefits and harms to individuals and society at large.</td>
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<tr>
<td>Unit 6</td>
<td>Physical Computing</td>
<td>Explore the relationship between hardware and software while building interactive projects on Adafruit’s Circuit Playground.</td>
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Learn more: https://code.org/csd
Monthly updates: https://code.org/educate/csd/status