

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, preparing 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 appropriate for 6th - 10th grade students. The curriculum emphasizes problem-solving, creation, and collaboration, while introducing students to the many ways computer science impacts their lives.

GRADES:

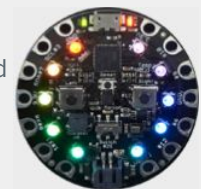
All grades will be classwork grades. There will be at least eight grades in a nine-weeks.

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

Curriculum tools:

- **App Lab:** JavaScript programming environment on Code.org, designed for creating event driven web apps with block-to-text workspace and debugging capabilities
- **Game Lab:** JavaScript programming environment on Code.org, designed for creating object oriented sprite-based games and animations with block-to-text workspace and debugging capabilities
- **Circuit Playground:** Adafruit's Arduino-based microcontroller has a number of components and sensors built right onto the board and is used as the hardware for physical computing lessons. Using the Maker Toolkit, students program Circuit Playground boards right from App Lab with easy-to-understand JavaScript commands and blocks
- **Web Lab:** HTML/CSS programming environment on Code.org used for website development



CS Discoveries unit overview

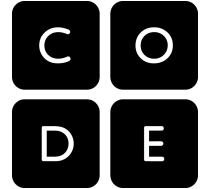
Semester 1: Exploration and Expression

Unit 1 Problem Solving	Explore the problem-solving process and the different ways humans and computers solve problems.
Unit 2 Web Development	Discover the languages powering the web. Build your own websites in HTML and CSS using Web Lab.
Unit 3 Animations and Games	Learn the powerful constructs underlying programming languages. Build interactive animations and games in JavaScript using Game Lab.

Semester 2: Innovation and Impact

Unit 4 The Design Process	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.
Unit 5 Data and Society	Develop binary representations of different kinds of information. Collect, analyze, visualize, and make automated decisions using data.
Unit 6 Physical Computing	Explore the relationship between hardware and software while building interactive projects on Adafruit's Circuit Playground.

Code.org is a 501(c)3 non-profit dedicated to expanding participation in computer science education by making it available in more schools and increasing participation by women and underrepresented students of color. The Code.org vision is that every student in every school should have the opportunity to learn computer programming.



Career Preparedness A

What is Career Preparedness?

The Career Preparedness course focuses on three integrated areas of instruction—academic planning, financial literacy, and technology. Career Prep A focuses only on the first and third areas. Course content ranges from college and career preparation to computer literacy skills to ways to manage personal finances and reduce personal risk. The area of technology is embedded into the course instruction. Mastery of the content standards provides a strong foundation for student acquisition of the skills, attitudes, and knowledge that enables them to achieve success in school, at work and across the span of life.

What will we learn?

As part of preparing students to be college and career ready, this course also equips them with the skills needed for business and industry, continuing education, and lifelong learning. Link to Alabama Career Preparedness Course of Study. Career Preparedness A covers Standards 1, 2, 2a, 3, 3a, 3b, 3c, 6, 6a, 8, 9, 10, 11, 11a, 12, 12a, 12b, 12c, 12d, and 12e.

Remember! Career Preparedness A counts as ½ high school credit. This grade goes on the student's permanent record and counts towards the student's GPA. It is required to graduate high school, and is only offered at MMS except through summer school for \$250.

Career prep is done at your own pace on Edgenuity. It MUST be completed before the end of the school year.