## Course Description:
Computer Science Explorations course introduces learners to the fundamental concepts of computer science and challenges them to explore the impacts of computing and technology. The course creates opportunities for learners to analyze problems, use creative thinking, and collaborate on developing solutions to real-world issues using computing. Topics include algorithms and programming, the structure and design of the Internet, the implications of design decisions, and the role of hardware platforms in computing. The course lays a foundation for more advanced computer science courses and a variety of career pathways.

*Currently, this course is equivalent to MS Computer Science 2A and 2B. Computer Science Explorations course will be eventually replaced with a non-AP version of Computer Science Principles.*

### The Design Process - CS Discoveries Unit 4
This unit introduces the broader social impacts of computing. Through a series of design challenges, learners explore how to better understand the needs of others while developing a solution to a problem. In teams, learners have the opportunity to identify a need that they care about, prototype solutions both on paper and in App Lab, and test solutions with real users to get feedback and drive further iteration.

*Approximate length of unit: five weeks*

### G Suite and Microsoft Office Suite
This unit deepens understanding of the G Suite, the Microsoft Office Suite, and transitioning between the two. Learners also explore file management, email, and identifying and differentiating between different kinds of software and their purposes.

*Approximate length of unit: four weeks*

### Physical Computing - CS Discoveries Unit 6
This unit explores the role of hardware platforms in computing and how different sensors can provide more effective input and output than the traditional keyboard, mouse, and monitor. Using code.org’s App Lab and Adafruit’s Circuit Playground, learners develop programs that utilize the same hardware inputs and outputs seen in the smart devices. The unit concludes with a Circuit Playground design challenge.

*Approximate length of unit: five weeks*

### The Internet - CS Principles Unit 1
This unit explores the technical challenges and questions that arise from the need to represent digital information in computers and transfer it between people and computational devices. Learners investigate the structure and design of the Internet and the implications of digital decisions.

*Approximate length of unit: four weeks*

### Exploratory Through Programming, Web Design, and Robotics - Optional Unit
In this unit, learners begin to deepen their understanding of programming, web design, or robotics, building on their interests. This unit also provides a preview of other high school computer science courses that learners might select to take after completion of Computer Science Explorations.

*Approximate length of unit: one-two weeks*