

## Computer Science Syllabus

Students explore how computers store complex information like numbers, text, images, and sound, and they debate the impacts of digitizing information. Alternating between lessons away from the computer ("unplugged"), and lessons that use digital tools called "widgets," this encourages an exploratory and collaborative approach to learning about digital information. Students will debate the pros and cons of digitizing information and the impacts of digital information on society and culture at large. Students learn how the Internet works and discuss its impact on politics, culture, and the economy. Students will use a digital tool called the Internet Simulator that simulates how different parts of the Internet work and forces students to grapple with and solve the problems each aspect of the Internet was designed to solve. Students will investigate an "Internet Dilemma," both from the standpoint of its technical background and its impacts on different groups of people. Students will design their first app while learning both fundamental programming concepts and collaborative software development processes. Students work with partners to develop this simple app that teaches classmates about a topic of personal interest. Students will learn how to use the App Lab to design user interfaces and write simple event-driven programs. Along the way, students learn practices like debugging, pair programming, and collecting and responding to feedback, which they will be able to use throughout the course as they build ever more complex projects.