

Computer Science Essentials

From learning what code is and how it works to learn how to keep their information and online activity protected, private and secure, this program teaches the essential introductory computer science knowledge students need to be successful and safe in today's technological world.

Grades: 3 - 5

Course Objectives



Have a better understanding of the history and use of code and what career options are available to them



Understand the foundations of computer science logic, code, and how computers work



Learn to interact online with kindness and respect



Understand how to safely use the internet

Technical Requirements

Operating System

- Chromebook: Chrome OS 100.0 or later
- Windows: 7, 8, 8.1, 10 or later
- Mac: OS X El Capitan 10.11 or later
- Linux: 64-bit Ubuntu 18.04+, Debian 10+, openSUSE 15.2+, or Fedora Linux 32+

Software Installed

- Google Chrome



STEAM Connections

- S** Students will learn about the functions and foundational principles of sequencing, algorithms, loops, and if- statements.
- T** Students will be taught the rules of safe digital interaction, and the core principles of cybersecurity, online safety, and digital citizenship.
- E** Students will learn about the basic hardware and software makeup of computers and the impact of each component on the larger system.
- A** Students will understand the concepts 'copyright' and 'plagiarism' to not only protect their content online but to also give credit to artists and creators when credit is due.
- M** The program will have students apply core math concepts including pattern recognition, estimation, and calculating percentages.

SEL Connections

Self-Awareness: Students will be given the chance to recognize where they can begin setting goals in order to successfully organize and reach objectives.

Self-Management: Students will develop their time management skills by having a mixture of "explore time" and "assignment time" where they will be required to learn and practice along with the instructor.

Social Awareness: Students will develop their social skills by working together with their teammates as they learn the core principles of teamwork and effective communication.

Responsible Decision Making: An exceptionally important skill in school, the workplace, and at home students will see and learn the value teamwork brings to their lives.

Relationship Skills: Students build and maintain healthy relationships with other players through community, cooperation, trade, and peacefully resolving conflict.



All Mastery Coding courses come with year-round professional development and comprehensive teacher support

