

# Introduction to Programming

## Grades 9 - 12



### Basic Operations and Concepts

**Standard 1: The student demonstrates a sound understanding of the nature and operation of Technology systems.**

1.1 Students demonstrate an understanding of the relationships between hardware components and software programs.

**Standard 2: The student is proficient in the use of technology.**

2.1 Students will understand and use appropriately input, processing, output, primary memory and secondary storage devices

### Social, Ethical and Human Issues

**Standard 4: The student practices responsible use of technology systems, information and software.**

4.1 Students will develop an awareness of the limitations and misuse of computing technology so that appropriate decisions can be made when solving problems

### Technology Productivity Tools

**Standard 6: The student uses technology tools to enhance learning, increase productivity and promote creativity.**

6.1 Students develop sequential and iterative algorithms and codes programs in prevailing computer languages to solve real-life problems

6.2 Students use sequential, conditional, selection, and repetition execution control structures such as menu-driven programs, which branch and allow user input

### Technology Communications Tools

**Standard 8: The student uses telecommunications to collaborate, publish and interact with peers, experts and other audiences.**

8.1 Students seek and respond to advice from peers and professional in delineating technological tasks

**Standard 9: The student uses a variety of media and formats to communicate information and ideas effectively to multiple audiences.**

9.1 Students demonstrate the ability to read, understand, and modify a program including the design description and process development

9.2 Students use good programming style, such as spacing, descriptive identifiers, comments, or documentation, to enhance the readability and understanding of the code

### Technology Problem-Solving and Decision-Making Tools

**Standard 13: The student uses technology resources for solving problems and making informed decisions.**

13.1 Students will develop an understanding of methods of analyzing problems, the planning and implementation of solutions using computers, including practice in applying these methods

