



High School Computer Science Python

Elective

Programming Language:

Python

Software used in Course:

Repl.it
Thonny

Supported Devices

Mac
Windows
Chromebook

Instructional Models:

Direct Instruction
Instructional Scolding
Use of Learning Objectives
Relevant Vocabulary
Bloom's Taxonomy or Questions
Inquiry-Based Instruction
Project-Based Instruction
Cooperative Learning
Independent Study

Supported Learning Models:

Classroom
Blended
Hybrid
Synchronous
Asynchronous

Standards Aligned:

National and State
Computer Science
Standards

Reinforces:

Math
ELA
Social-Emotional Learning

Course Description

Expand core computer science skills. Analyze, manipulate, and develop programs using Python, a line coding language. Learn programming concepts like comments, methods, and print functions. Unplugged and Digital Citizenship lessons explore real-world applications of the Python language through data manipulation, ethical behavior, and STEM careers. At the end of this course, students will be familiar with Python and its real-world application in computer science today.

Learning Objectives

Each lesson plan is designed to enable students to achieve specific learning outcomes related to course aligned computer science competencies. For example, at the end of this course students will be able to:

- Define and explain programming as it relates to Python.
- Modify and add to a program to produce new output.
- Identify and implement print functions and comments while developing a software program.
- Identify and explain the advantages Python provides in programming.
- Evaluate digital scenarios and justify their reasoning with supporting details.
- Identify applications and describe tradeoffs of machine learning.