Teacher: Jessica Novillo Argudo, Jing Xue, Rich Parker
Unit Plan: Introduction to Python
Topic of the Lesson: Introduction
Grade and Content: 10th - 12th / Computer Science
Date: Fall 2022 - Day 1

Learning Objectives:

- Students will learn what Python is and how it works.
- Students will learn to create a simple Python program and run it from the command line.
- Students will learn how to use Replit to write Python code.

NYS standards:

- **9-12.CT.5:** Modify a function or procedure in a program to perform its computation in a different way over the same inputs, while preserving the result of the overall program.

Prerequisites:

- Set up Replit to work with Python

Content-specific vocabulary:

- Text-based coding
- Python

Materials/Resources:

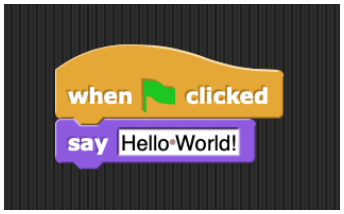
- Computers
- Smartboard
- Slides
- Python
- Replit
- Google Classroom

Assessments:

- Programming log

Warm-up (10 minutes):

- The teacher will ask students to open SNAP and do the following:



- The teacher will ask students to open Replit (students have setup previously Replit to work with Python) and type python on the shell, and then write:
    - >>> print("Hello World!")
- The teacher will ask students about the similarities and differences between SNAP and Python code.

Activity / Sequence of Lesson (30 minutes):

- The teacher will ask students if anyone is familiar with Python. If there are students who know Python, the teacher will ask what they do about it.
- The teacher will explain what Python reserved words are and will give a list of these words.
- The teacher will model how to run the Python interpreter on the shell in Replit and write Python code there.
- The teacher will explain the print() function and model some examples, such as:
    - >>> print(“Hello World!”)
    - >>> print(“This is a test”)
    - >>> print(“”)
    - >>> print(45)
- The teacher will ask the students to practice printing other messages on their own on the Python console.
- The teacher will explain that writing more code than just a print() will require a .py file to make programming easier. Also, the teacher will say that this file is called a script.
- The teacher will model how to create a .py file in Replit, how to write code inside it, and how to run it.
- The teacher will ask students to individually work on the “00 LAB - Introduction” that can be found on Google Classroom.
- The teacher will walk around the classroom to observe students’ performance and assist with questions or problems about the lab.

Summary / Next Steps / Exit Slip (5 minutes):

- The teacher will ask students to complete their lab as homework if they still need to finish it.

- The teacher will ask students to complete their “Daily Log Programming,” which can be found on Google Classroom.