Grade 8
Distance Learning Module 10: Week of: 6/8/2020-6/12/2020

Grade 8 Computer Science - *Modified from* *Unit 2 - Introduction to Python Programming*

Targeted Goals from Stage 1: Desired Results

Content Knowledge:

- Programming languages, such as Python, are very user-friendly and useful in allowing programmers and end-users to complete tasks, yet they are confining and leave no margin for error.
- Programmers debug and revise their programs to improve the stability of the program and end user experience.
- Programming uses logic to turn programming constructs into a language a computer can interpret and apply.

Vocabulary: Python, syntax, command, conditional statement, nested conditional, function, "for" loop, nested loop, indentation, assignment operator, comparison operator, logical operator, "while" loop, "break" statement, and infinite loop.

Skills:

- Demonstrate troubleshooting techniques within the process of finding and removing syntax errors within Python code
- Write functional lines of code following the syntax of the software
- Use Python commands and conditional loops to solve puzzle modules
- Use conditionals to detect whether a condition is true and only run code in certain cases
- Use assignment operators to change the value of a variable
- Use comparison operators to compare values
- Use logical operators to check multiple conditions at the same time or reverse the value of a boolean
- Distinguish between assignment, comparison, and logical operators
- Identify differences between a "for" loop and a conditional "while" loop
- Use "while" loops to continue executing code while a condition is true
- Identify differences between a "for" loop and a "while" loop
- Use the "break" command to stop a loop from iterating before it ends naturally

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks
Monday ● Sign into the online coding web app Tynker and begin **Lesson 4: Conditional Loops** of Python 101 in Tynker.com	● All necessary resources will be available on Google Classroom. ● Teacher will be available to assist students as needed during office hours.	● The teacher will be able to track student progress via Tynker moderation.

Description of Task (s):	Resources and Materials:	Daily Checks
Tuesday ● Sign into the online coding web app Tynker and continue working on **Lesson 4: Conditional Loops** of Python 101 in Tynker.com	● All necessary resources will be available on Google Classroom. ● Teacher will be available to assist students as needed during office hours.	● The teacher will be able to track student progress via Tynker moderation.
Wednesday ● Sign into the online coding web app Tynker and continue working on **Lesson 4: Conditional Loops** of Python 101 in Tynker.com ● **Live class with Google Meet (ACE/BDF classes)**	● All necessary resources will be available on Google Classroom. ● Teacher will be available to assist students as needed during office hours.	● The teacher will be able to track student progress via Tynker moderation.
Thursday ● Sign into the online coding web app Tynker and continue working on **Lesson 4: Conditional Loops** of Python 101 in Tynker.com	● All necessary resources will be available on Google Classroom. ● Teacher will be available to assist students as needed during office hours.	● The teacher will be able to track student progress via Tynker moderation.
Friday ● Sign into the online coding web app Tynker and continue working on **Lesson 4: Conditional Loops** of Python 101 in Tynker.com	● All necessary resources will be available on Google Classroom. ● Teacher will be available to assist students as needed during office hours.	● The teacher will be able to track student progress via Tynker moderation.

Week criteria for success (attach student checklists or rubrics):

- Students will complete all Python 101 Lesson 4 activities
- Students will use Python commands to solve puzzle modules
- Students will identify coding errors

Supportive resources and tutorials for the week (plans for re-teaching):

My video tutorials above can be viewed multiple times for students to re-teach themselves. I will have my official office hours every day 1:00-2:00, when I will respond to student emails ASAP. But you can contact me at kiefer.michael@madisonps.org any time of the day.