

Grade 8

Distance Learning Module 9: Week of: 6/1/2020-6/5/2020

## **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 (Return to Google Classroom or snapshots from a cell phone)
Monday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and begin <b>Lesson 3: Conditional Logic</b> of Python 101 in Tynker.com</li> </ul>	<ul style="list-style-type: none"> <li>All necessary resources will be available on Google Classroom.</li> <li>Teacher will be available to assist students as needed during office hours.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will be able to track student progress via Tynker moderation.</li> </ul>
Tuesday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and begin <b>Lesson 3: Conditional Logic</b> of Python 101 in Tynker.com</li> </ul>	<ul style="list-style-type: none"> <li>All necessary resources will be available on Google Classroom.</li> <li>Teacher will be available to assist students as needed during office hours.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will be able to track student progress via Tynker moderation.</li> </ul>
Wednesday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and continue working on <b>Lesson 4: Conditional Loops</b> of Python 101 in Tynker.com</li> <li><b>Live class with Google Meet (ACE/BDF classes)</b></li> </ul>	<ul style="list-style-type: none"> <li>All necessary resources will be available on Google Classroom.</li> <li>Teacher will be available to assist students as needed during office hours.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will be able to track student progress via Tynker moderation.</li> </ul>
Thursday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and continue working on <b>Lesson 4: Conditional Loops</b> of Python 101 in Tynker.com</li> </ul>	<ul style="list-style-type: none"> <li>All necessary resources will be available on Google Classroom.</li> <li>Teacher will be available to assist students as needed during office hours.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will be able to track student progress via Tynker moderation.</li> </ul>
Friday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and continue working on <b>Lesson 4: Conditional Loops</b> of Python 101 in Tynker.com</li> </ul>	<ul style="list-style-type: none"> <li>All necessary resources will be available on Google Classroom.</li> <li>Teacher will be available to assist students as needed during office hours.</li> </ul>	<ul style="list-style-type: none"> <li>The teacher will be able to track student progress via Tynker moderation.</li> </ul>

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

- Students will complete all Python 101 Lesson 3 & 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](mailto:kiefer.michael@madisonps.org) any time of the day.