

## 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, snake\_case, identifier, comment, function, loop, “for” loop, nested loop, indentation, arithmetic operator.

#### 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 to solve puzzle modules
- Identify patterns in their code
- Use "for" loops to reduce lines of code
- Use arithmetic operators to add, subtract, multiply, and divide values
- Apply coding knowledge to nest multiple “for” loops inside each other

#### 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>• <b>MEMORIAL DAY – no school</b></li></ul>		
Tuesday <ul style="list-style-type: none"><li>• <b>Live class with Google Meet (ACE/BDF classes)</b></li><li>• Sign into the online coding web app Tynker and begin <b>Lesson 2: Loops and Patterns</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>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Wednesday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and continue working on <b>Lesson 2: Loops and Patterns</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>
Thursday <ul style="list-style-type: none"> <li>Sign into the online coding web app Tynker and continue working on <b>Lesson 2: Loops and Patterns</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 finish <b>Lesson 2: Loops and Patterns</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 2 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.