**To:**       Larry Marek

**From:** Sidlinger Computer Corporation

**Date:**   7 June 2019

**Re:**      Broad Lesson Plan for CCC Summer Camp Advanced Coding

**Overview:**

Attached below is the overview for the Sidlinger Computer Corporation Advanced Coding Summer 2019 Curriculum. The total curriculum has a one-week duration that will be duplicated for each week of advanced coding. The outline is a general sketch of what topics will be covered each day, along with specific goals that will be achieved by the end of each section.

**Lesson Plan:**

1. Day 1:

* Team creations and Ice Breakers
* Introduction to Raspberry Pi
* Introduction to Python
* Introduction to circuit prototyping
* Goal: Blink an LED with a button using GPIO

1. Day 2:

* Development of Python coding
* Development of GPIO
* Development of circuit prototyping
* Science behind sound and electronics
* Goal: Build and program a Morse Code Translator

1. Day 3:

* Introduction to API
* Introduction to making requests
* Introduction to data handling
* Introduction to JSON
* Goal: Program an ISS coordinate tracker and address locator

1. Day 4:

* Introduction to file handling
* Development of input/output using a game
* Development of Python coding using error handling
* Reading and writing to text files
* Goal: Read a file and write to another file using a Python program

1. Day 5:

* Introduction to web servers
* Introduction to html programming
* Introduction to web coding and server creation
* Introduction to Minecraft server hosting
* Goal: Build and run a local web server and a local Minecraft server