Unit 3 Lab 4
Learning Targets

Essential Questions

- What is CircuitPython?
- What is a microcontroller?
- What does the CircuitPython REPL allow us to do?

Key takeaways

- CircuitPython (CP) is a custom version of Python designed to run on microcontrollers.
- Microcontrollers are small computers with limited speed and memory.
- The brains inside many IoT devices will be a microcontroller.
- Microcontrollers are typically programmed to run a single program.
- The CP REPL provides access to common Python commands and provides access to hardware on the Adafruit Feather Bluefruit Sense.

Teaching Tips

Lab 4 will begin to introduce students to the “thing” they will play with the rest of the semester. The Adafruit Feather Bluefruit Sense is a powerful microcontroller with lots of added “hardware”.

Accessing hardware on the Feather will follow a pattern similar to building a turtle object - Import a module, Create an object, Use the predefined methods or attributes. Emphasize the fact that this pattern is not new and will be used over and over again in the remaining labs.

In Lab 4 students will use this 3 step process to access the RED_LED and the NEOPIXEL on the Feather Sense.