Unit 3 Lab 5
Learning Targets

Essential Questions

- What is the Adafruit Feather Bluefruit Sense?
- Why use the Adafruit Feather Bluefruit Sense?

Key takeaways

- The Adafruit Feather Bluefruit Sense is a powerful microcontroller in the Feather form factor.
- The Feather form factor allows the addition of many FeatherWings which can make the Feather Sense even more useful.
- Adafruit Feather Bluefruit Sense has an ARM Cortex processor running at 64MHz
- The Feather Bluefruit was chosen because it has built in BLE and the following sensors:
    - 9-DOF motion sensing - Accel/Gyro/Magnetometer
    - Proximity, Light, Color and Gesture Sensing
    - Sound sensing
    - Temperature, Baro. Pressure and Humidity Sensing

Teaching Tips

Lab 5 exposes the students to most of the sensing capabilities of the Feather Sense. Students will again see the common pattern of importing a module, creating an object and then using a method or attribute of the object.

Memorizing the specific module and exact syntax to create the specific sensor objects is unnecessary. Students should focus on understanding how to use the different sensor objects. They can always go back and review the provided CP file for the exact syntax.

Isn't it wonderfully easy to use CP to access lots of different sensor data from the Feather Sense?

In part 2 of the lab, students will refer back to Lab 3 and use file objects to store data received over the serial/USB port. Refer to the comments in the provided data logger file to make sure students are able to use the proper port to create the serial object.

In part 3 of the lab, students will import the time module and learn how to use it to add a timestamp to the collected data.