Unit 4 Lab 6
Learning Targets

Essential Questions

- What is Bluetooth Low Energy?
- What is a BLE peripheral and central?
- What is the easiest way to connect via BLE to the Feather Sense?
- What are some predefined BLE packets that students can use?

Key takeaways

- BLE on the Feather Sense is 2.4GHz signal.
- BLE peripherals advertise
- BLE centrals listen for advertising devices and sometimes connect.
- The Adafruit Bluefruit LE Connect App is an easy way to connect to an Adafruit BLE device.
- The Adafruit Bluefruit Connect App allows users to send and receive packets of information from the BLE device.
- ButtonPackets and ColorPackets are two predefined packet types that can be used easily with CP.

Teaching Tips

Lab 6 introduces the students to connecting wirelessly using Bluetooth Low Energy.

Make sure to provide students with the new required libraries/modules and make sure they are for the same release of CP running on the Feather Sense devices.

The Bluefruit Connect App is available for both Apple and Android devices.

In Lab 6 students will use the UARTService() for BLE communication. This service is similar to the connection between the Feather and the Mu IDE over the serial/USB connection.

Lab 6 asks the students to continue to think about reapplying experiences in different ways. Again, memorizing specific code syntax is not as important as being able to apply ideas to new situations - to solve new problems.

External Neopixels string… make it and connection points shown in the Lab 6 video.