Little Bits Introduction - Circuit Building

Power + Button + LED

Construct a simple circuit with Power + Button + LED. *You may use the LED or Long LED.* When you press the Button, what do you see? Replace the Button with the Pulse Bit. What changes? What does that tell you about how the Button and Pulse Bits work?

Power + Pressure Sensor + Bargraph

Construct a circuit using Power + Pressure Sensor + Bargraph. Press the Pressure Sensor and what do you see? How could you light up only 3 of the lights?

Power + Dimmer + Bargraph

Construct a circuit using Power + Dimmer + Bargraph. *You may use the Dimmer or Slide Dimmer.* What do you see? How many bars light up? If you want to have more bars light, do you turn clockwise or counter-clockwise? If you want it to flash LED every 1 second, what Bit should you replace?

Power + Button + Buzzer

Construct a circuit using Power + Button + Buzzer. When you press the Button, what happens? If you want the Buzzer to buzz off and on, what Bit can you add or replace? If you want to make the Buzzer go on and off faster, what should you do?

Power + Dimmer + Motor

Construct a circuit using Power + Dimmer + Motor. *You may use the Dimmer or Slide Dimmer, and the DC Motor, the Vibration Motor.* When you adjust the Dimmer, what do you see? If you want to have less movement, what Bit should you add or replace?

Power + Sound Trigger + Fan

Construct a circuit using Power + Sound Trigger + Fan. What do you see at first? Adjust the sensitivity of the Sound Trigger so that the fan only spins when you clap your hands.

Power + 2 Inputs + 2 Outputs	Power + Any 4 Bits
Construct a circuit using Power + any 2 Inputs + any 2 Outputs. What do you see? Change the order of the Bits. How does that move change the Outputs? (Here's one example.)	Construct a circuit using Power + Any 4 Bits. What could your circuit be used for?

Power + Button + RGB

When you press the button, what do you see? If you want to have yellow light, what bit can you add, or replace? If you want to have flashing red lights, what should you do?

Power + Button + Vibration Motor

When you press the button, what do you see? If you want to have less vibration, what bit can you add, or replace? How many ways can you modify the circuit to have less vibration?

Power + Pulse + Bargraph

What do you see? Can you change the speed of the flashing to flash the lights every second? Every 3 seconds? If you only want to light up 2 bars, what bits can you add? If you want the lights to flash but to determine the number of bars to light u using applied pressure, what do you have to do?

Power + Pulse + Bargraph + Button + LED

What do you see? Can you change the brightness of the LED to dimmer? Can you show 5 bars light up with no LED light? If you want the LED to flash, what do you have to do?

Power + Pulse + Dimmer + Bargraph + Vibration Motor

What do you see? Can you rearrange the circuit so you can change the vibration speed while maintaining the flashing Bargraphs' 5 lights? If you replace the Pulse with a Pressure Sensor, can you still flash the Bargraph and vibrate the motor?

Power + Dimmer + Vibration Motor + Button + Bargraph

What do you see? When you adjust the Dimmer, what happens? When you press the Button, what happens? Can you think of a game for this?