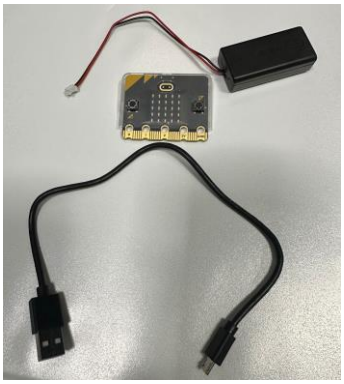
Activity
Lesson Plan

Activity Name	Lesson Name	Lesson #
Name Badge	Micro:Bit Configurable Name Badge	1
Lesson Description:	In this lesson, participants will learn how to make a name badge with micro:Bit v2 with configurable effects, sounds and much more.	

Lesson Objective(s):	The learner will create a basic name badge that can do much more than just display the name on LED, the learner is to explore the micro:bit's capabilities.

Equipment & Supplies	• 1 micro:bit • 2 AAA batteries and a micro:bit battery holder • 1 USB-C Cable • Access to a computer with internet access and a running camera

Room Preparation & Materials Setup	The stations for the attendees need to include a computer for each with the whole kit (micro:bit, USB-C cable, battery pack). You will need a large screen connected to your laptop/computer that attendees are able to comfortably follow the steps when you demonstrate on demand. 

Instructional Steps	Facilitation Tips:
1. First step is to download the .hex file from West Houston Institute's GitHub page to be able to upload it to the MakeCode. So, open the github.com/WestHoustonInstitute/**Introduction-to-Electronics-on-microbit** address from your own screen before attendees try to download the .hex file from the GitHub repository and make sure everybody is in the correct repository which is 1-Microbit_Name_Badge_w_Melody. 2. Now we will find the .hex file from the folder that the software is contained in. Make everybody go to Software_Setup folder and make sure they have downloaded the .hex file (When they click on it they will see the download button in its page). 3. This is where they upload the .hex file to the MakeCode web IDE. Attendees now will upload the .hex file to the https://makecode.microbit.org open the link in your own screen and show the upload button and click on upload file to browse the downloaded file. 4. After they have successfully uploaded the file, they should be able to see CodeBlocks. Ask them to customize inside the show string text, which should be their name, and the melodies. 5. After they customize everything, they need to connect their micro:bit with USB to the computer and flash the code using the download button. It will ask them to pair their micro:bit. 6. Now they should be able to display their name on the micro:bit. Ask them to use A, B and A+B buttons to interact with the music module. After they do, ask them to change the melodies from the MakeCode editor, and download the new code to the micro:bit again to see and hear the changes.	The best setting to do this module activity is a "computer lab" where each participant has their own computer and the instructor also has a computer connected to a large screen that every participant can follow comfortably. The best way to track the success of the participant is to go and see their screen after each instruction step if it is doable (the number of attendees matter in this).

Lesson Reflections	Future Actions