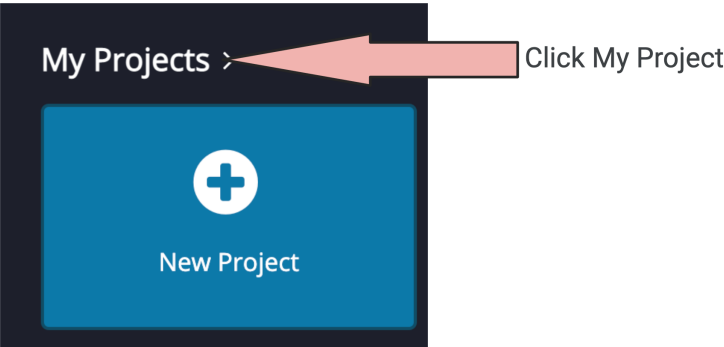
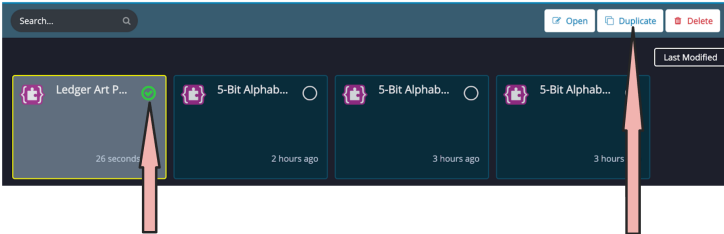
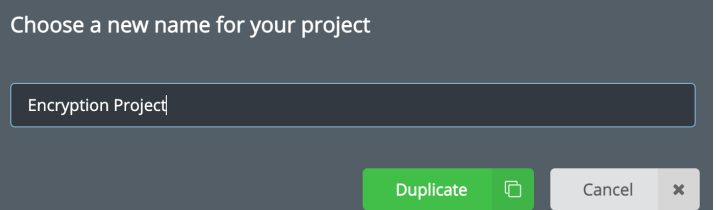
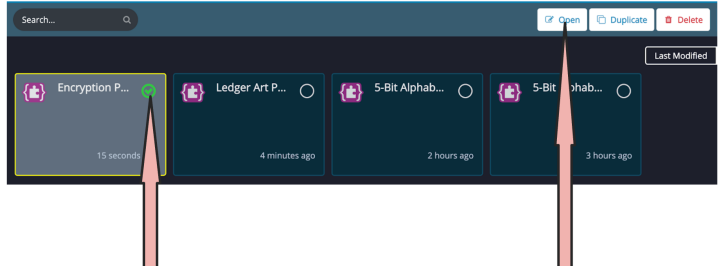


Setup the Encryption Project

Part 1: Create the Encryption Project

<p>1. Go to https://makecode.adafruit.com/ and click “My Projects” on the left, above the “New Projects” button</p>	 <p>Click My Project</p>
<p>2. Find your Ledger Art Project, and click the circle in the top right circle so that the green check appears.</p> <p>Then click Duplicate in the top right corner. This will copy your Ledger Art Project so that any changes you make will not impact your past work.</p>	 <p>Find your Ledger Art Project code, and click the circle in the top right corner so the green check appears</p> <p>Click Duplicate</p>
<p>3. Name your new project “Encryption Project”</p>	 <p>Choose a new name for your project</p> <p>Encryption Project</p> <p>Duplicate Cancel</p>
<p>4. Click on the new Encryption Project so that the green check appears.</p> <p>Click Open in the top right corner of the screen.</p>	 <p>Click on your Encryption Project so that the green check appears</p> <p>Click Open</p>


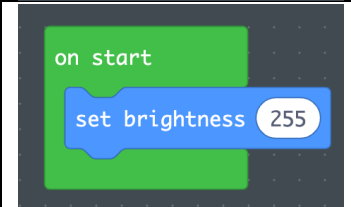
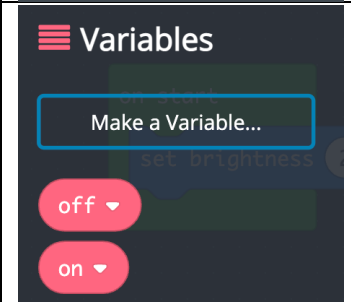

Part 2: Setup the Encryption Project

There are three parts to the code you will write:

- 1) On Start, where we set the colors of the *on* and *off* variables and set the brightness to 255
- 2) Functions, where we code the Neopixels of each letter
- 3) Forever, where we spell out each letter of the message and pause one second between each

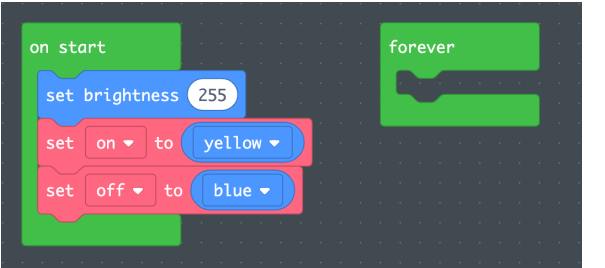
On which partner's account was the duplicate of the Ledger Project code that we named Encryption Project? That person will be Driver 1. The other person will be Driver 2.

On Start (Driver 1)

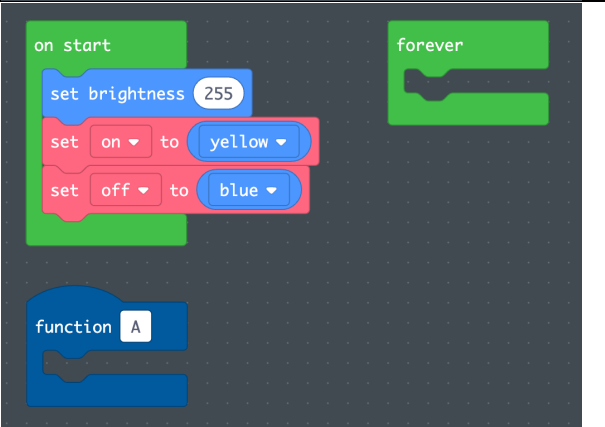
<p>1. Drag the <i>on start</i> block from the Loop menu onto the workspace.</p>	
<p>2. Set the brightness to 255 by dragging the <i>set brightness</i> block from the Lights menu into the <i>on start</i> block</p>	
<p>3. Create two variables called <i>on</i> and <i>off</i> in the Variables menu.</p>	
<p>4. Use the <i>set ___ to ___</i> block in the Variables menu to set what color on and off should represent. The color block is in the Lights menu. Choose whatever colors you want as a group.</p>	

Functions (Driver 2 start, switch after each function)

1. Add the *forever* block from the Loops menu to the workspace on the right, next to the *on start* block.



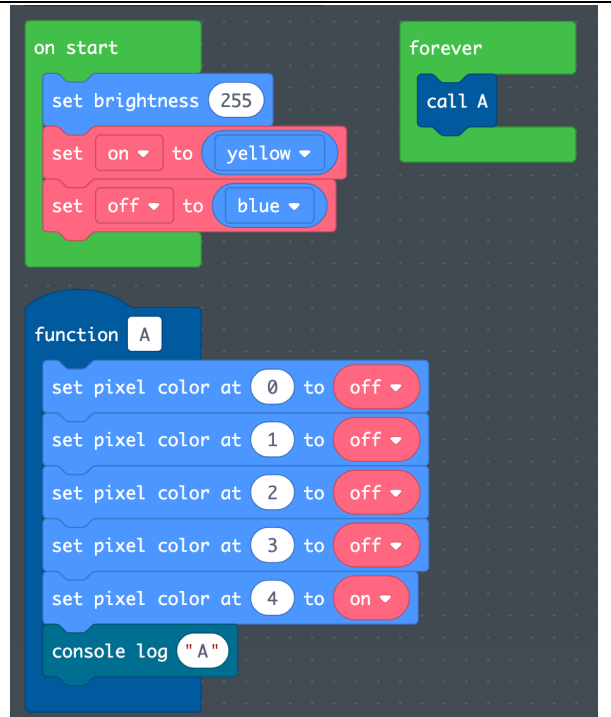
2. As a pair, decide on which letter you want to start with. **You will end up creating all the letters required for both of your messages.** Add the function below the on start block in the workspace. Functions are under Advanced.



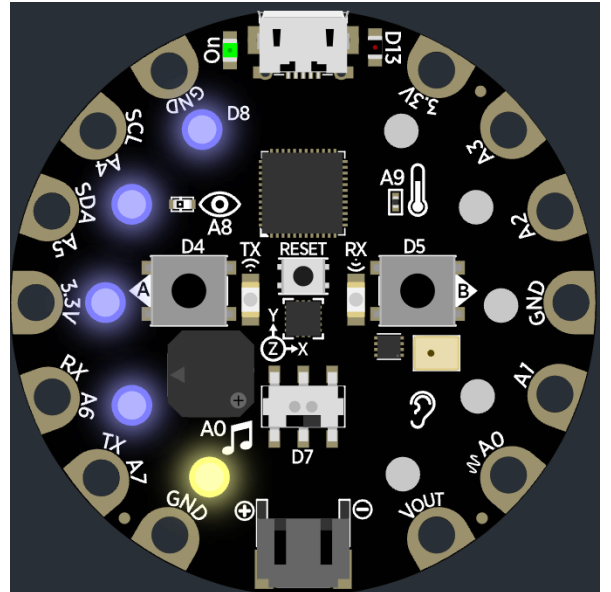
3. Use your code from the *Program an Encrypted Message* handout to add the required code to your function. You can set the colors of the Neopixels inside the Lights menu. You can set your pixels to on and off using the variable blocks in the Variables menu. Finally, make sure you *console log* the name of the letter at the end of the function. You can find console log in Advanced → Console.



4. Make sure your function works as intended. We want to test each time we create a function. To do this, call the function name in the forever block. You can find the function block in Advanced → Functions.

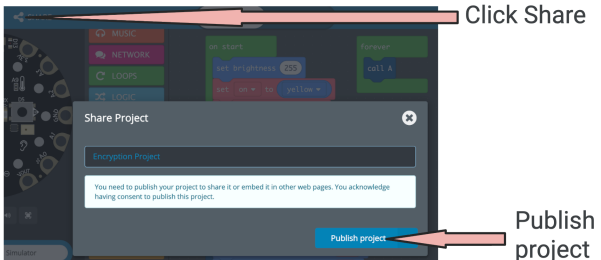
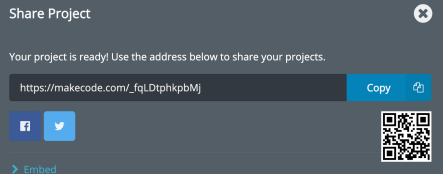
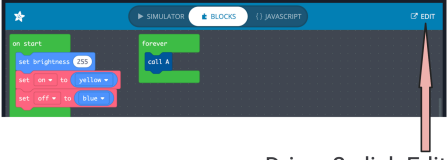
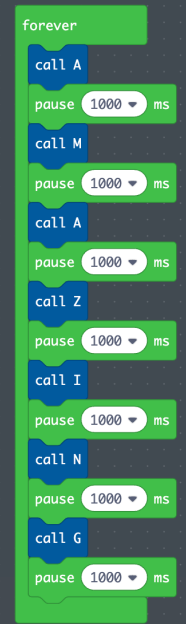


5. Use the play button under the simulator and your *Program an Encrypted Message* handout to make sure your function runs as intended.



6. Switch drivers and make a new function for the next letter. Keep going until all letters have been completed for both partners.

Loop (each partner is the Driver for their own project)

<p>1. Driver 1 shares the project with their partner. To do this, click Share in the top left corner, and click Publish Project.</p>	
<p>2. Copy the share link.</p>	
<p>3. Driver 1 signs out of MakeCode, and Driver 2 signs in. Paste the share link.</p>	
<p>4. Driver 2 call each letter of the message in order with a one second pause between letters in the <i>forever</i> block. The <i>pause</i> block is in the Loops menu.</p>	
<p>5. After Driver 2 finishes, Driver 2 downloads code to CPX. Driver 2 downloads and tests code. Driver 2 logs out, and Driver 1 logs in. Driver 1 adds the letters to their <i>forever</i> loop. When done, download the code and test on the CPX.</p>	