

Getting a computer setup to program the Adafruit Gemma v2

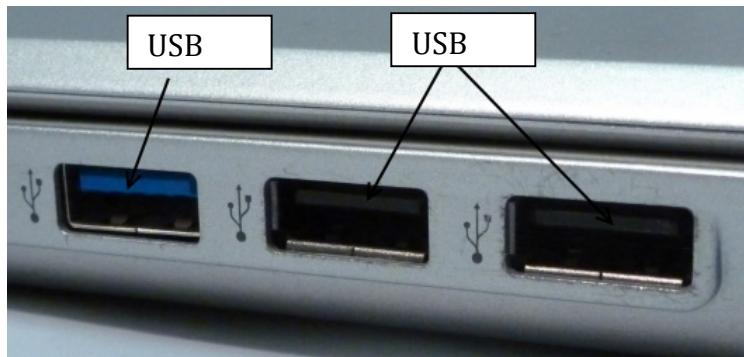
Do not plug the Gemma into your computer until the appropriate step in this guide.

Terminology:

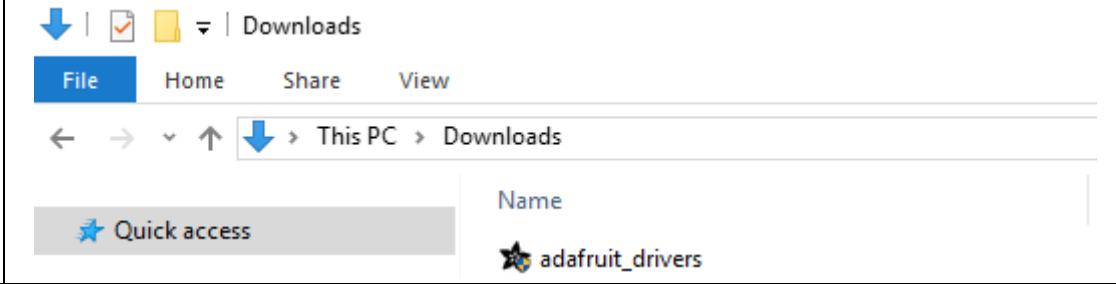
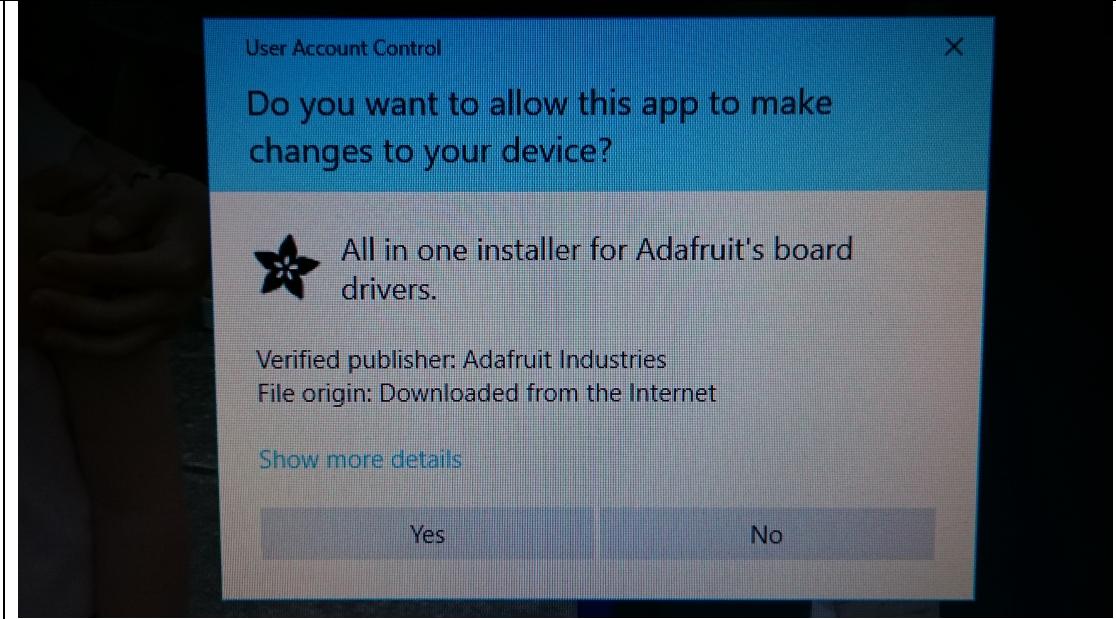
- **Gemma**¹ is the quarter-sized black circle controller board
- The **Arduino IDE**² is the software you will install to write and load programs onto the Gemma
- **MicroUSB cable** is shorthand for a [USB A Male to Micro Male cable](#) – It's a common (Android, not iPhone) cell phone cable.
HOWEVER, you'll want one that can transfer data from your phone to your computer (not just charge your phone)

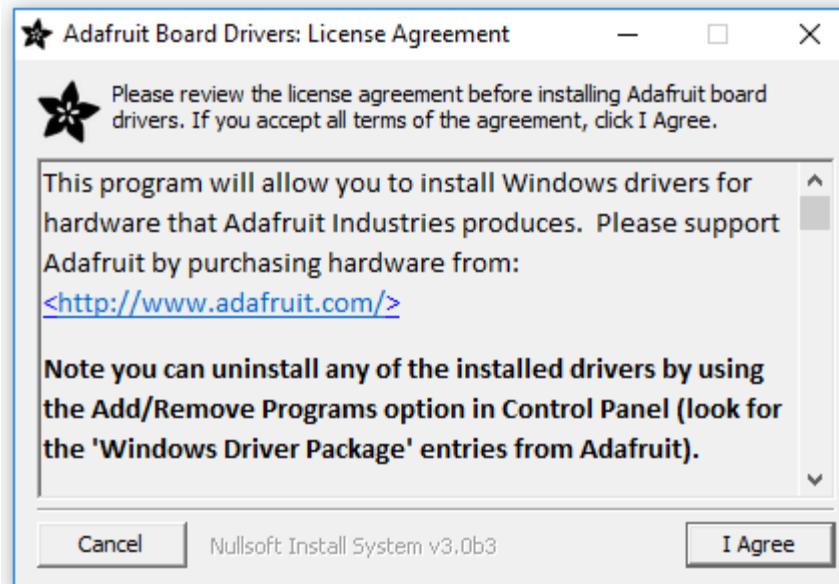
This tutorial is for a:

- **Windows** user (pictures are for Windows 10)
- With a **USB 2.0 port**³ (look in the port, typically 3.0 ports are blue or marked with an "SS" – Gemma DOES NOT WORK with 3.0 ports, you'll need a [2.0 hub](#))

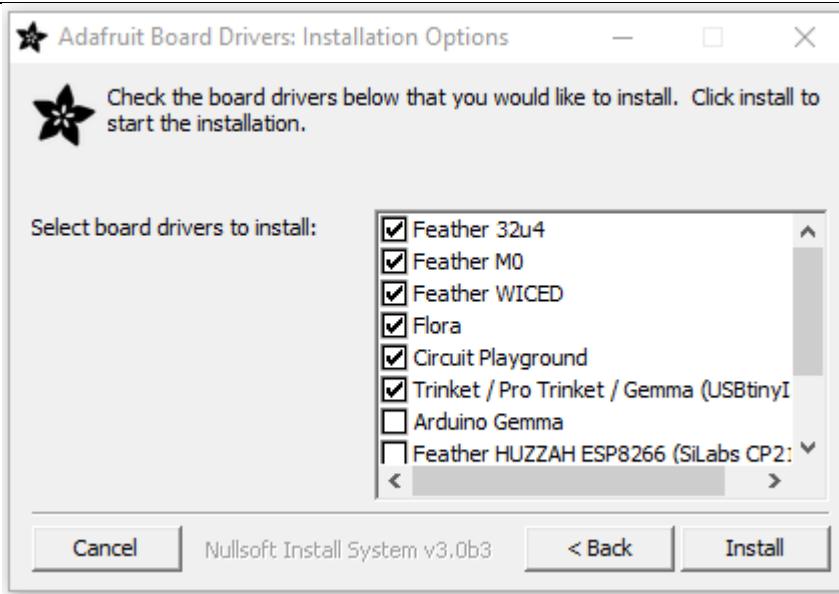


Instructions	Corresponding screenshot
Download the Adafruit Windows Driver Click "Save"	

<p>Find the adafruit_drivers.exe probably in your Downloads folder and double click to run.</p>	
<p>Windows may ask "Do you want to allow this publisher to make changes to your device" – say Yes. Then Click "I Agree"</p>	

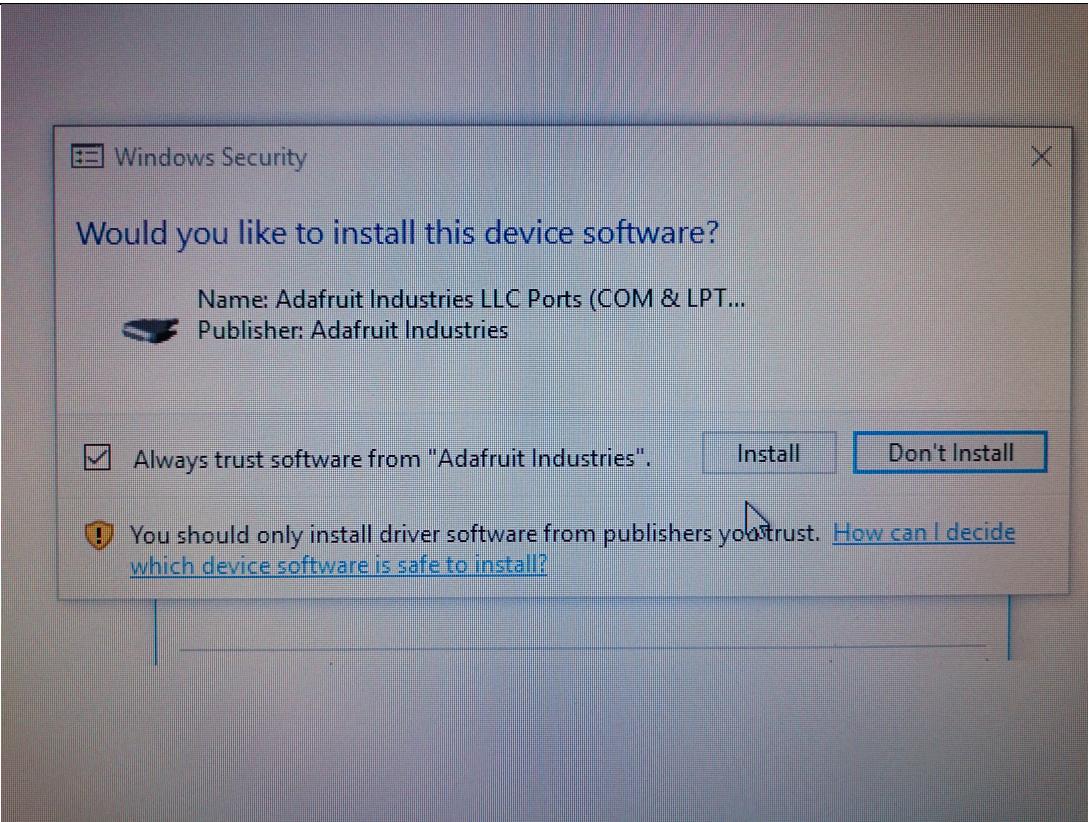


Ensure "Trinket / Pro Trinket / Gemma (USBtinyISP)" is checked (others do not matter) and click "Install"



It may ask again if you want to install device software.

Close when completed.



Download [Adafruit's all in 1 Arduino installer](#)

adafruit-arduino-1.6.4-windows.zip finished downloading.

Open

Open folder

View downloads

X

Find the ZIP file downloaded – probably in
This PC > Downloads

Unzip the folder into the C: drive

Compressed Folder Tools

Share View Extract

This PC > Downloads > adafruit-arduino-1.6.4-windows

Name	Type	Compressed size	Password ..
arduino-1.6.4	File folder		

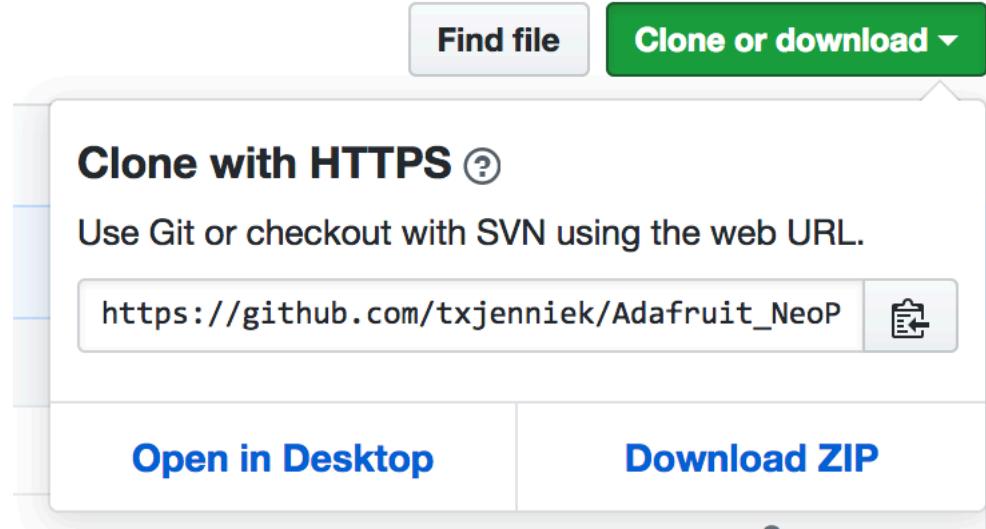
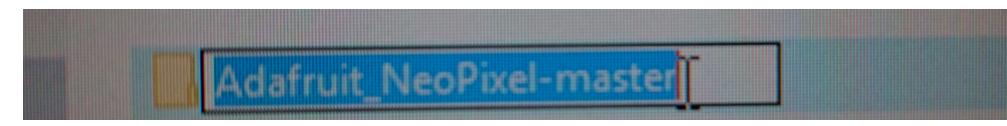
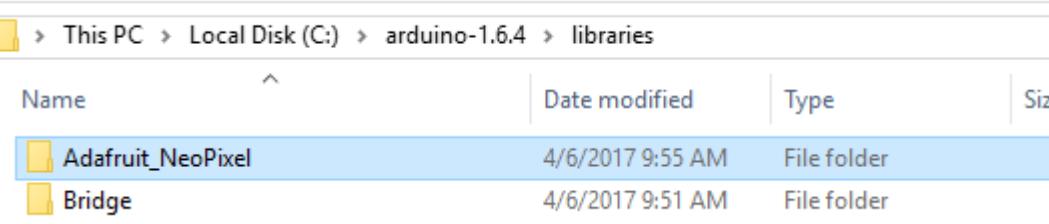
Copy Items

Select the place where you want to copy 'arduino-1.6.4', then click the Copy button.

- Local Disk (C):
 - > AMD
 - > AndroidSDK
 - > ATI
 - > GOG Games
 - > inetpub
 - > Intel
 - > kiosk
 - > Logs
 - > PerfLogs

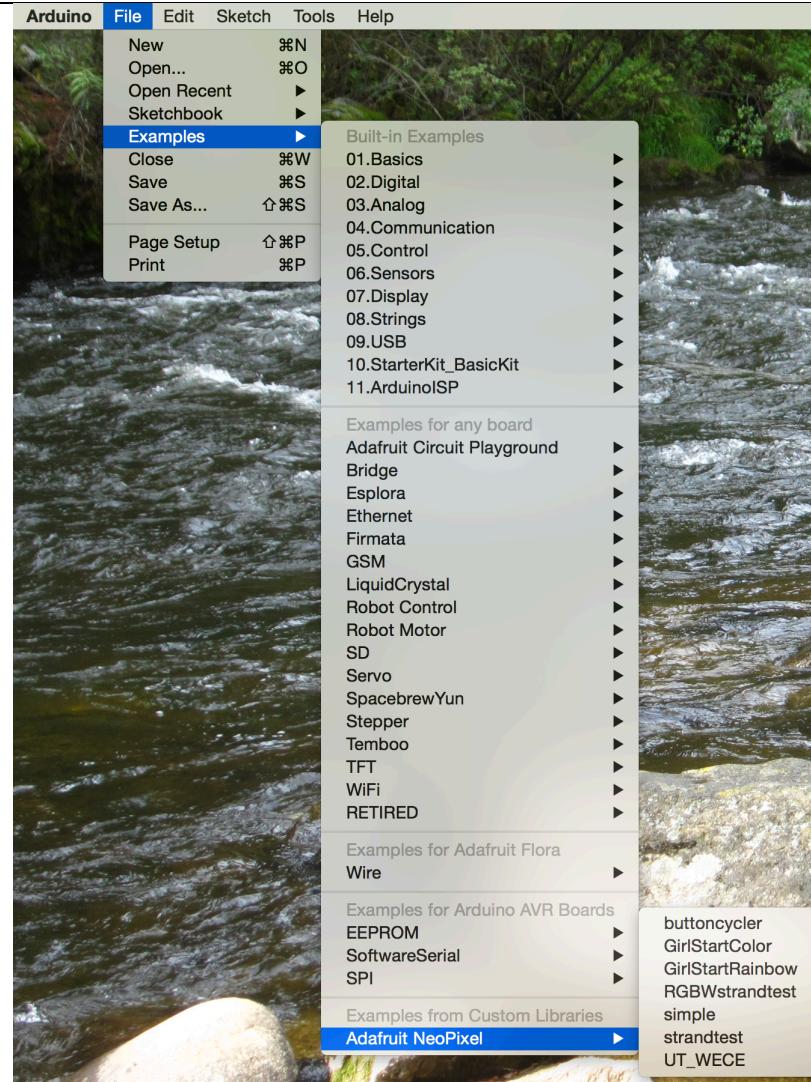
Folder: Local Disk (C:)

Make New Folder Copy Cancel

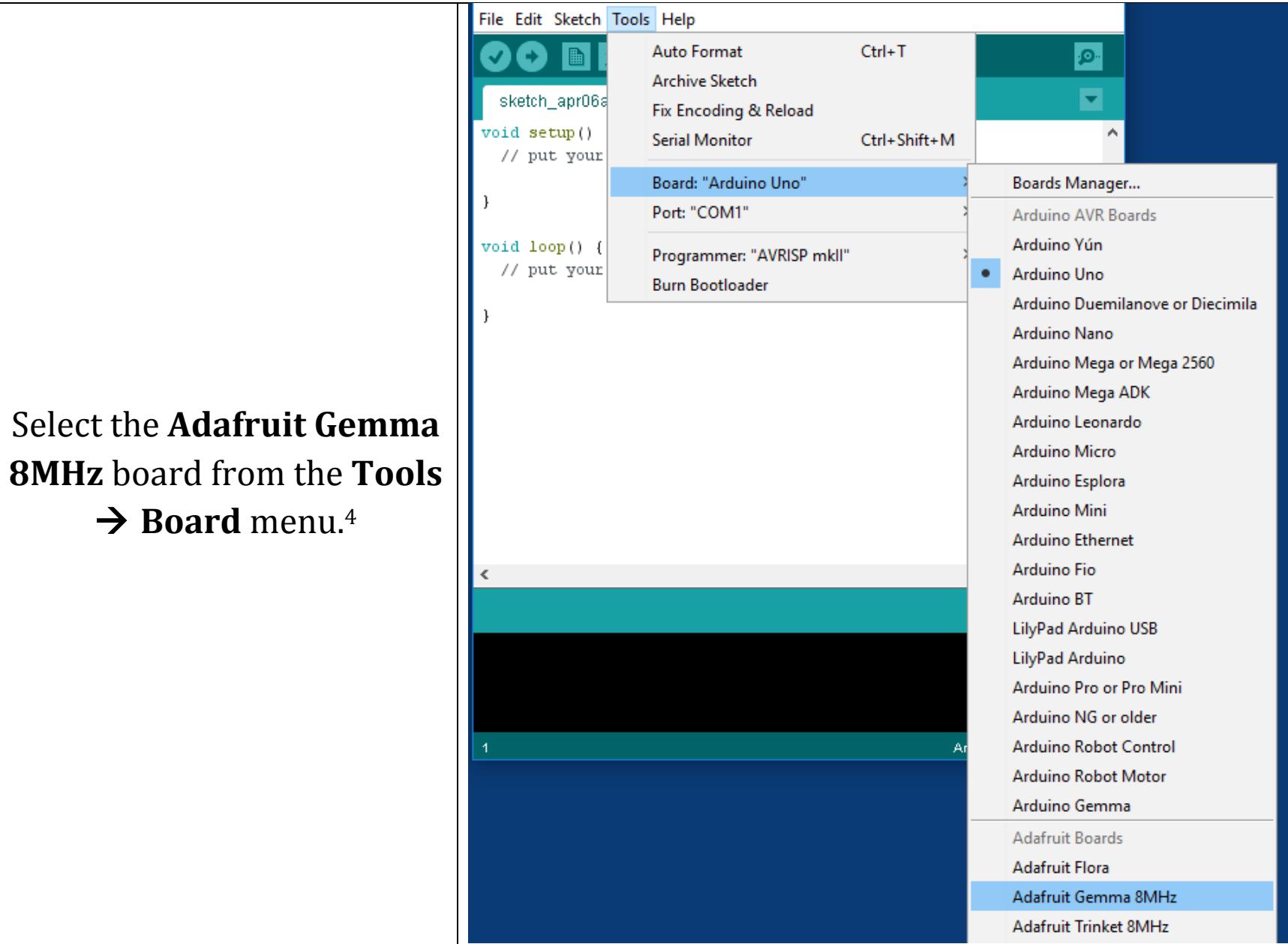
<p>Visit https://github.com/txjenniek/Adafruit_NeoPixel_Girlstart and click the green download button - choose ZIP file.</p>										
<p>Unzip the folder and rename “Adafruit_NeoPixel_Girlstart” (remove the “-master”)</p>										
<p>Move the folder to C:/arduino-1.6.4/Libraries</p>	 <table border="1" data-bbox="741 833 1790 1057"> <thead> <tr> <th>Name</th> <th>Date modified</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>Adafruit_NeoPixel</td> <td>4/6/2017 9:55 AM</td> <td>File folder</td> </tr> <tr> <td>Bridge</td> <td>4/6/2017 9:51 AM</td> <td>File folder</td> </tr> </tbody> </table>	Name	Date modified	Type	Adafruit_NeoPixel	4/6/2017 9:55 AM	File folder	Bridge	4/6/2017 9:51 AM	File folder
Name	Date modified	Type								
Adafruit_NeoPixel	4/6/2017 9:55 AM	File folder								
Bridge	4/6/2017 9:51 AM	File folder								

Open the Arduino.exe and select the starter code you wish to open

**Files → Examples →
Adafruit NeoPixel → WECE**

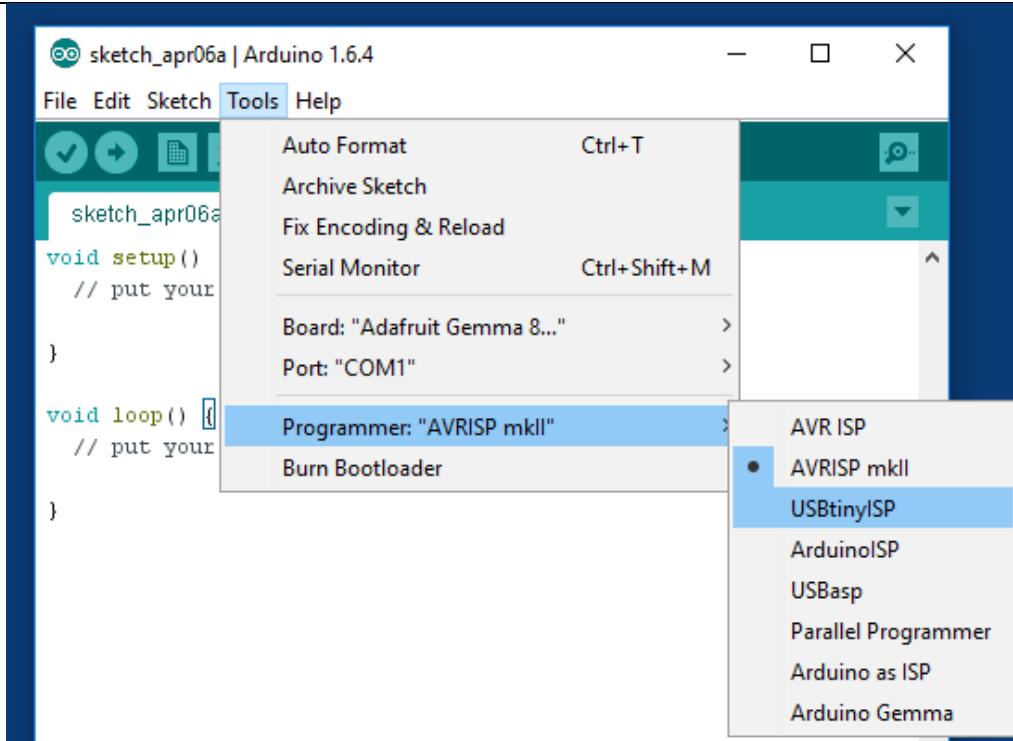


Make any changes to the code you'd like – Optional!



Select the **Adafruit Gemma 8MHz** board from the **Tools → Board** menu.⁴

Then, select **USBtinyISP**
from the **Tools →**
Programmer sub-menu



Now plug in the Gemma using the micro USB cable

The green power LED should be lit. If not, check that the switch is pushed ON.

Press-and-release (don't hold!) the tiny onboard button with a fingernail

The red LED should blink. If not, press the tiny onboard button again.

Click "Upload" in Arduino IDE

You have upload within **10 seconds** of pressing the tiny onboard button. If you don't make it, just press the tiny button again.

¹ <https://learn.adafruit.com/introducing-gemma/introduction>

² <https://www.arduino.cc/en/main/software>

³ <https://learn.sparkfun.com/tutorials/connector-basics/usb-connectors>

⁴ <https://learn.adafruit.com/introducing-gemma/setting-up-with-arduino-ide#adafruit-gemma-black-gemma>

Need more help? Adafruit supports their products through their forum:

<https://forums.adafruit.com/viewforum.php?f=51&sid=0afe22143395eeafdd28c8c0dc434619>

Practice good cybersecurity habits; don't include your first or last name in your username when signing up for the forums!