

# Nibble Arduino setup guide

## Uploading code with Arduino

## Installation and setup

Welcome to the Nibble Arduino setup guide!

We'll use Arduino IDE to teach you how to upload code to your Nibble, so let's get started.

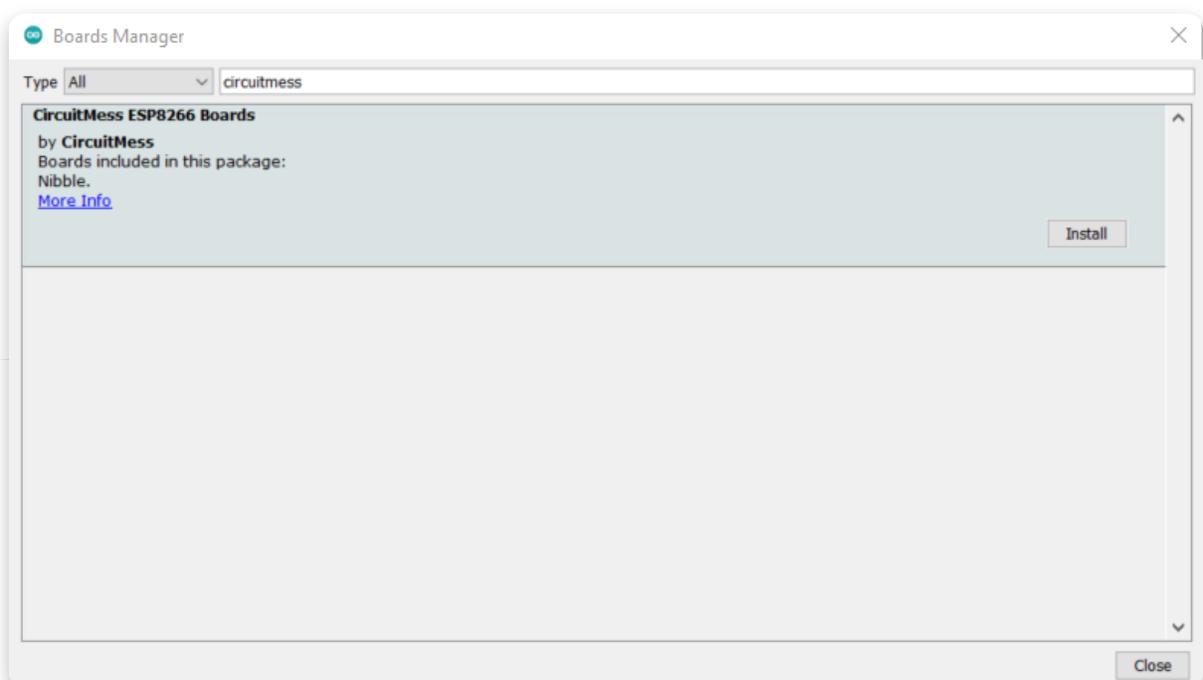
## Installation

Before starting make sure to download and install Arduino IDE. You can do that right [here](#).

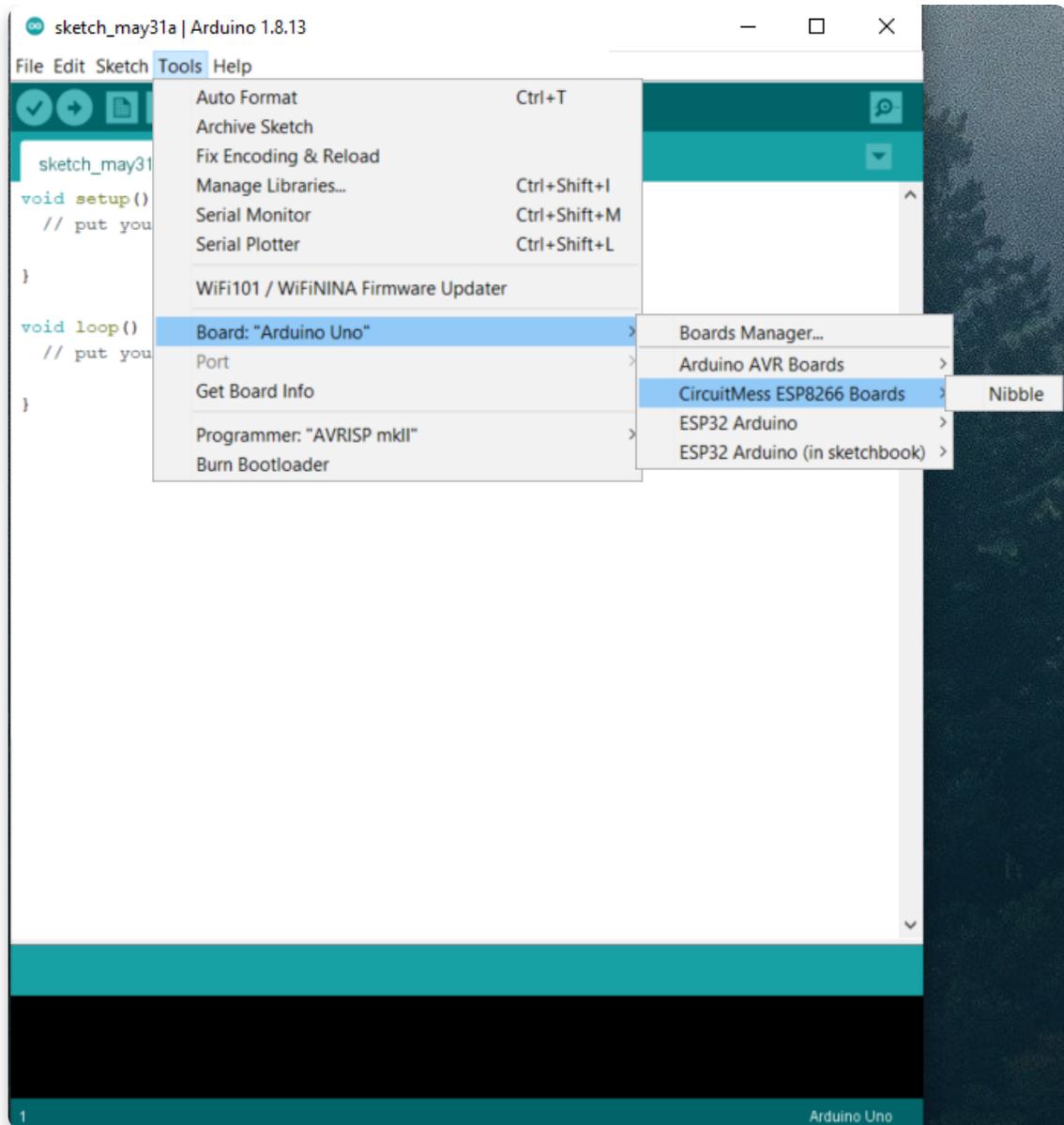
After you download and install Arduino IDE, you should **install the Nibble board**.

Here's how to do that:

1. Open the Arduino IDE
2. Go to File -> Preferences
3. Under Additional board Manager URLs add the following URL:  
[https://raw.githubusercontent.com/CircuitMess/Arduino-Packages/master/package\\_circuitmess.com\\_esp8266\\_index.json](https://raw.githubusercontent.com/CircuitMess/Arduino-Packages/master/package_circuitmess.com_esp8266_index.json)
4. Close the preferences by clicking OK
5. Open the Board Manager under Tools -> Board -> Boards Manager
6. Type 'CircuitMess' in the search bar
7. Click the Install button on the CircuitMess ESP8266 Boards package



Then go to Tools -> Board, and select Nibble from the dropdown menu.



Now, you should [download and install the Nibble library](#).

After downloading the .zip file from Github, extract it to your Arduino libraries folder. Create the folder if it doesn't exist already.

On Windows and Mac devices, it is located in Documents/Arduino/libraries/, on Linux devices it's in /home/{user}/Arduino/libraries/

## Uploading code

After setting everything up, we can move on to uploading code to your Nibble.

### Choose what to upload

You can either write your own simple program or download one of the games from our [Github repository](#) to use as a starting point.

Here's an example of a simple code you can upload:

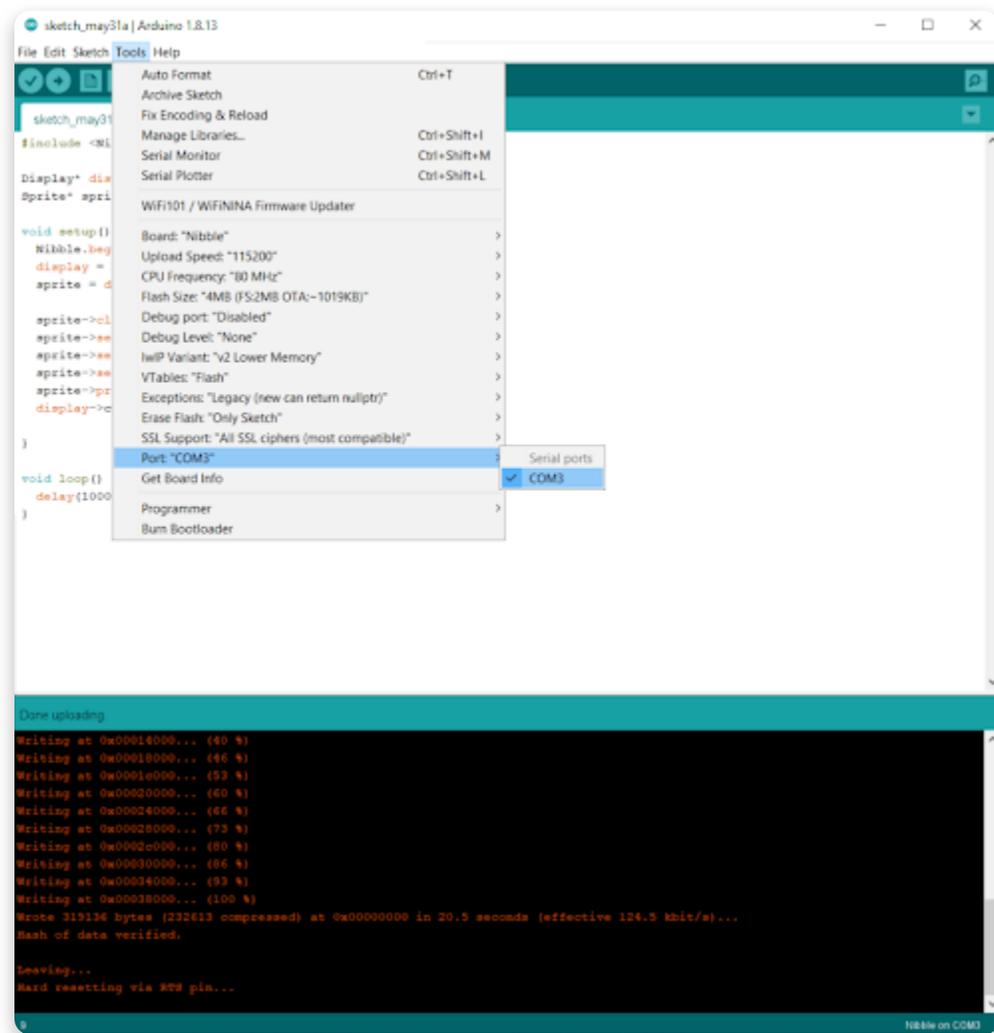
```
1 #include
2
3 Display* display;
4 Sprite* sprite;
5
6 void setup() {
7   Nibble.begin();
8   display = Nibble.getDisplay();
9   sprite = display->getBaseSprite();
```

```
10
11  sprite->clear(TFT_BLACK);
12  sprite->setTextColor(TFT_WHITE);
13  sprite->setTextFont(2);
14  sprite->setCursor(0,0);
15  sprite->print("Hello World!");
16  display->commit();
17
18 }
19
20 void loop() {
21   delay(1000);
22 }
```

Let's make sure your Nibble is ready for the upload!

Turn on your Nibble and plug it into your computer with a USB cable.

Next, in Arduino go to Tools -> Port, and select the port your Nibble is connected to. It's usually the only option available.



Then, click the Upload button (arrow pointing to the right).

```
sketch_may31a | Arduino 1.8.13
File Edit Sketch Tools Help
Upload
sketch_may31a $
#include <Nibble.h>

Display* display;
Sprite* sprite;

void setup() {
  Nibble.begin();
  display = Nibble.getDisplay();
  sprite = display->getBaseSprite();

  sprite->clear(TFT_BLACK);
  sprite->setTextColor(TFT_WHITE);
  sprite->setTextFont(2);
  sprite->setCursor(0,0);
  sprite->print("Hello World!");
  display->commit();
}

void loop() {
  delay(1000);
}

Done uploading.
Writing at 0x00014000... (40 %)
Writing at 0x00018000... (46 %)
Writing at 0x0001c000... (53 %)
Writing at 0x00020000... (60 %)
Writing at 0x00024000... (66 %)
Writing at 0x00028000... (73 %)
Writing at 0x0002c000... (80 %)
Writing at 0x00030000... (86 %)
Writing at 0x00034000... (93 %)
Writing at 0x00038000... (100 %)
Wrote 319136 bytes (232613 compressed) at 0x00000000 in 20.5 seconds (effective 124.5 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...

Nibble on COM3
```

And that's it! You have now uploaded your code to the Nibble. Great job!