Lab4Schools

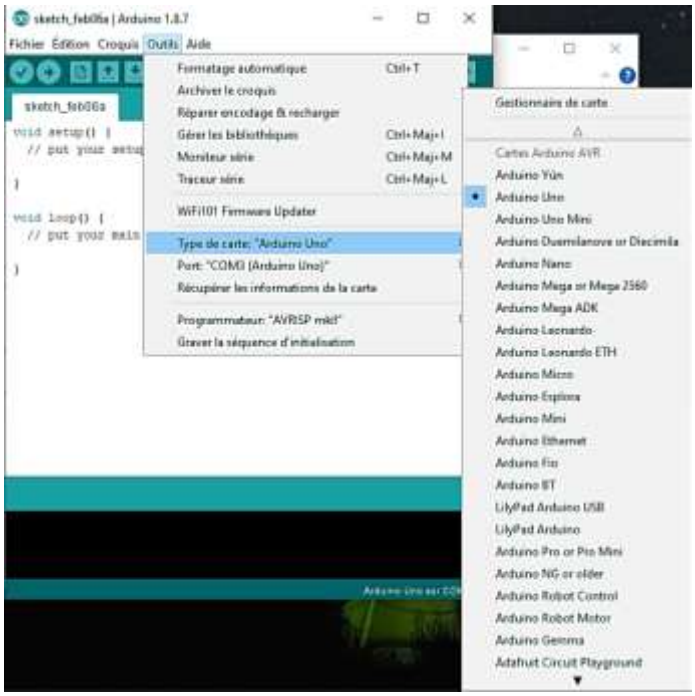
Lab Activity “Arduino”

Co-funded by the Erasmus+ Programme of the European Union

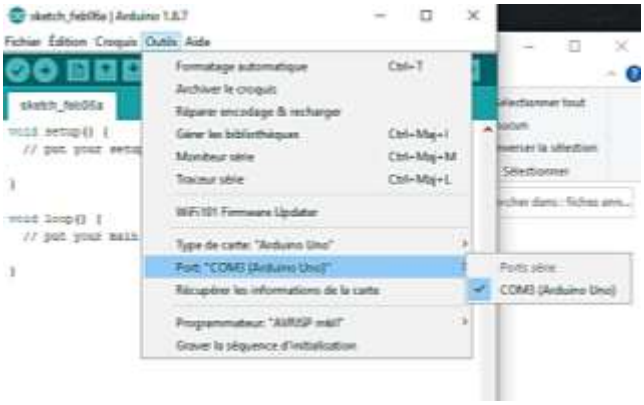
1- LAUNCH OF ARDUINO

Launch the ARDUINO software. A window opens.
(See fact sheet 2)
Create a new file.

We will test the programs made under Tinkercad and go further.
You saved these during the previous activity.



Select Board Type : Tools menu > Board Type > Choose Arduino /Genuino Uno.



Then **plug the** USB cable into the arduino board, then plug the cable into one of the USB ports on your computer. **Then select the port** to which your USB cable is plugged from the Tools menu > Port.

2- LED PROGRAMMING

Programming of 2 LEDs

Open your Word file in which you saved your activity performed under Tinkercad.
Select the desired program and copy it to the Arduino program editor.
Check the code and correct any errors visible in the dialog area.

When the code is correct, upload the code to the Arduino board.

On which pins should your 2 LEDs be connected ?
Perform proper wiring using the following equipment:

The Groove Base Shield for quick connection

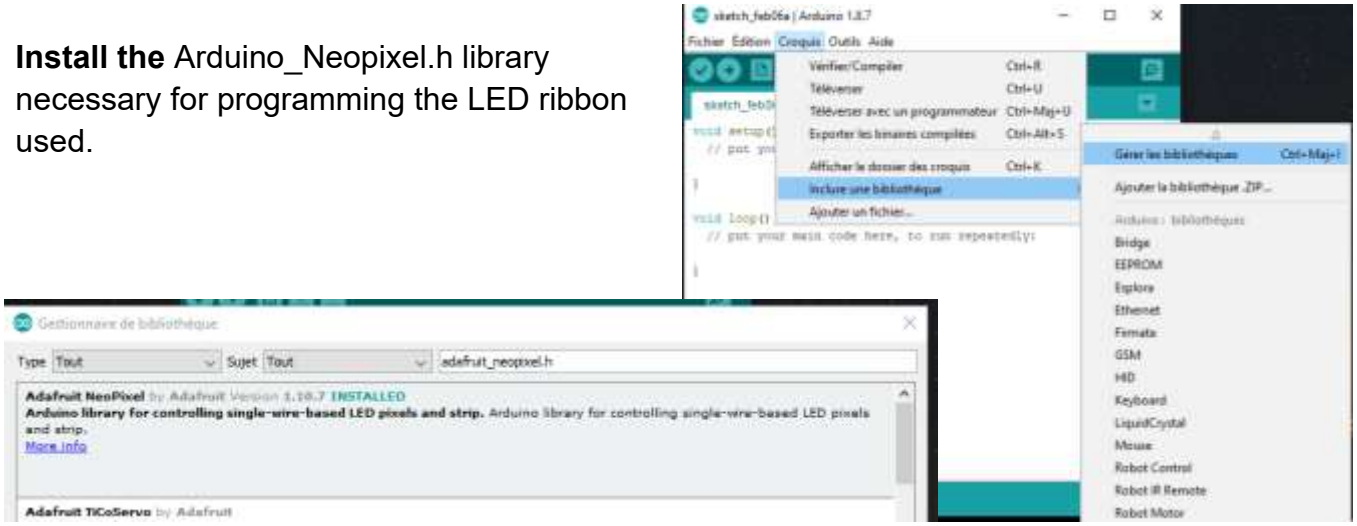
2 different color LEDs and Groove cables

Observe the operation.
Have your teacher validate the function**.**

3- PROGRAMMING A RIBBON OF LEDS

Create a new file.
Open your Word file in which you saved your activity performed under Tinkercad.
Select the desired program and copy it to the Arduino program editor.

Install the Arduino_Neopixel.h library necessary for programming the LED ribbon used.



What changes should be made to the program made under Tinkercad?
Check the code and correct any errors visible in the dialog area.
When the code is correct, upload the code to the Arduino board without having plugged in the LED ribbon and then **disconnect the USB cable** from the Arduino board.
On which pin should the LED tape be wired?

Perform proper wiring using the following equipment:

The Groove Base Shield for quick connection
The mains block
Groove cables
the LED ribbon + groove connection module

Observe the operation.
Have your teacher validate the function**.**