

Touch-light

1.Learning goals

In this lesson we mainly know RGB lights and learn how to use RGB blocks to control the color of RGB lights. The RGB lamp color change and switch are controlled when the micro:bit P2 interface is touched by programming.

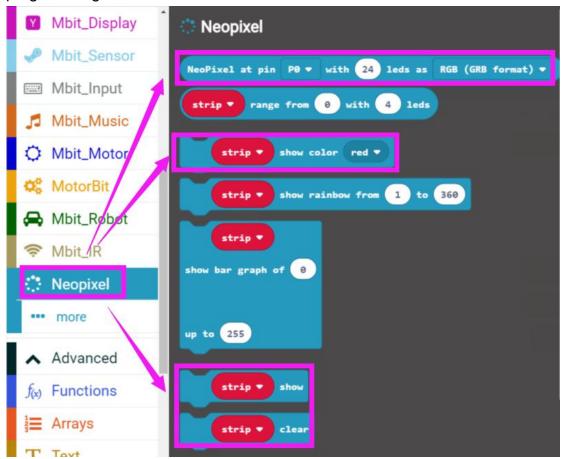
2.Programming method:

Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: http://microbit.org/ to enter the programming interface to program.

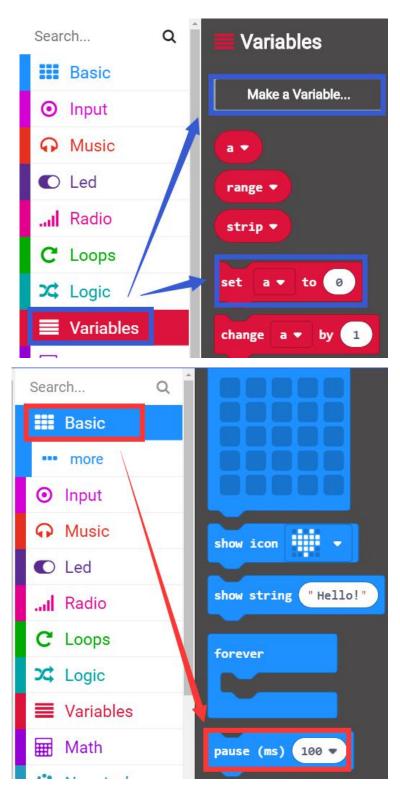
Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click [New Project] to program.

3.Looking for blocks

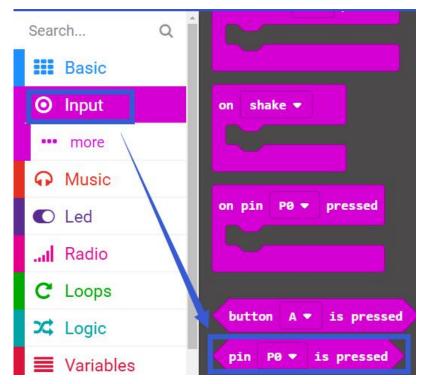
The following is the location of the building blocks required for this programming.











4.Combine building block

The summary program is shown below:

```
on start

set a v to 0

set strip v to NeoPixel at pin P1 v with 2 leds as RGB (GRB format) v

forever

if pin P2 v is pressed then

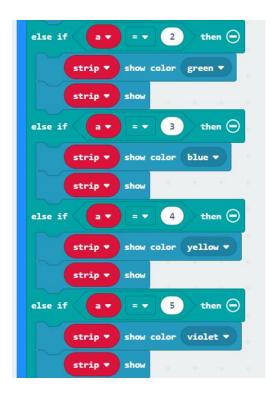
pause (ms) 500 v

set a v to a v + v 1

if a v = v 1 then

strip v show color red v
```

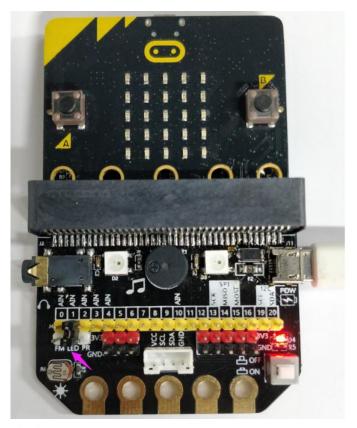






Note: The jumper cap needs to be connected to the P1 and LED pins on the basic expansion board. As shown below.





5. Experimental phenomena

After the program is successfully downloaded, the micro:bit basic expansion board will not light; When you touch P2 and GND, the RGB light will change color: red->green->blue->yellow->violet-> purple -> orange -> white.