Lesson 1

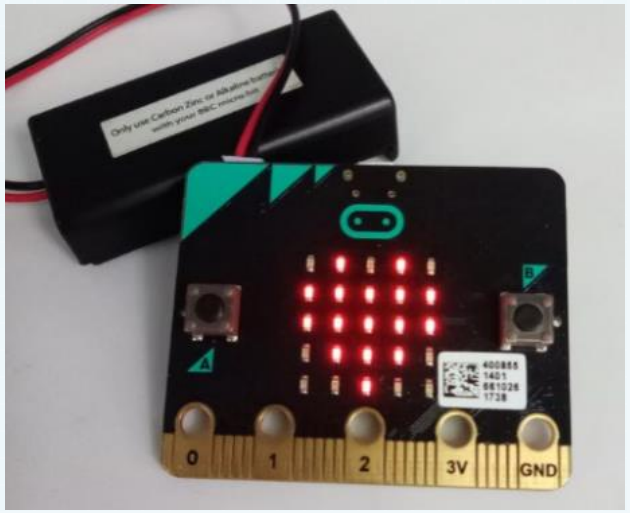
micro:bit basic lesson 1“Heart beat”

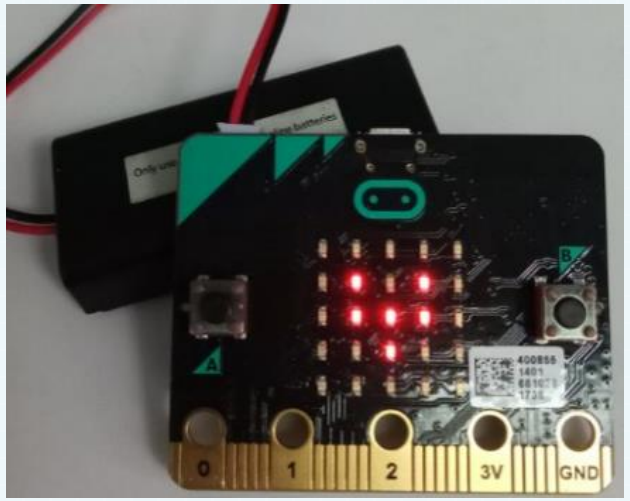
micro:bit entry video tutorial

Content

Part 1

Learning goals





Showing a big heart sharp on LED matrix firstly, and showing small heart later, this cycle looks like heart beat.

Part 2

Preparation

Hardware:

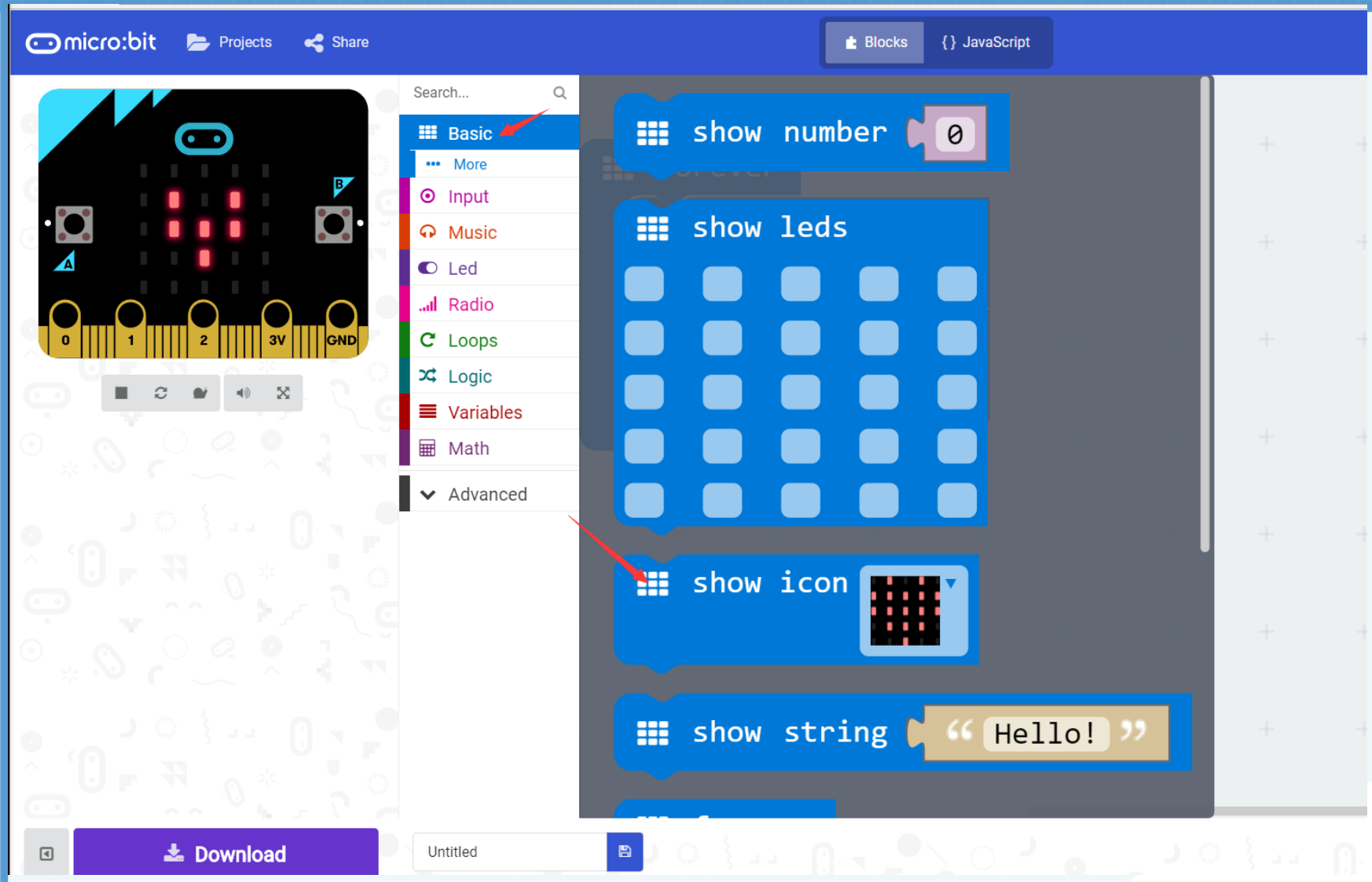
- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

micro:bit entry video tutorial

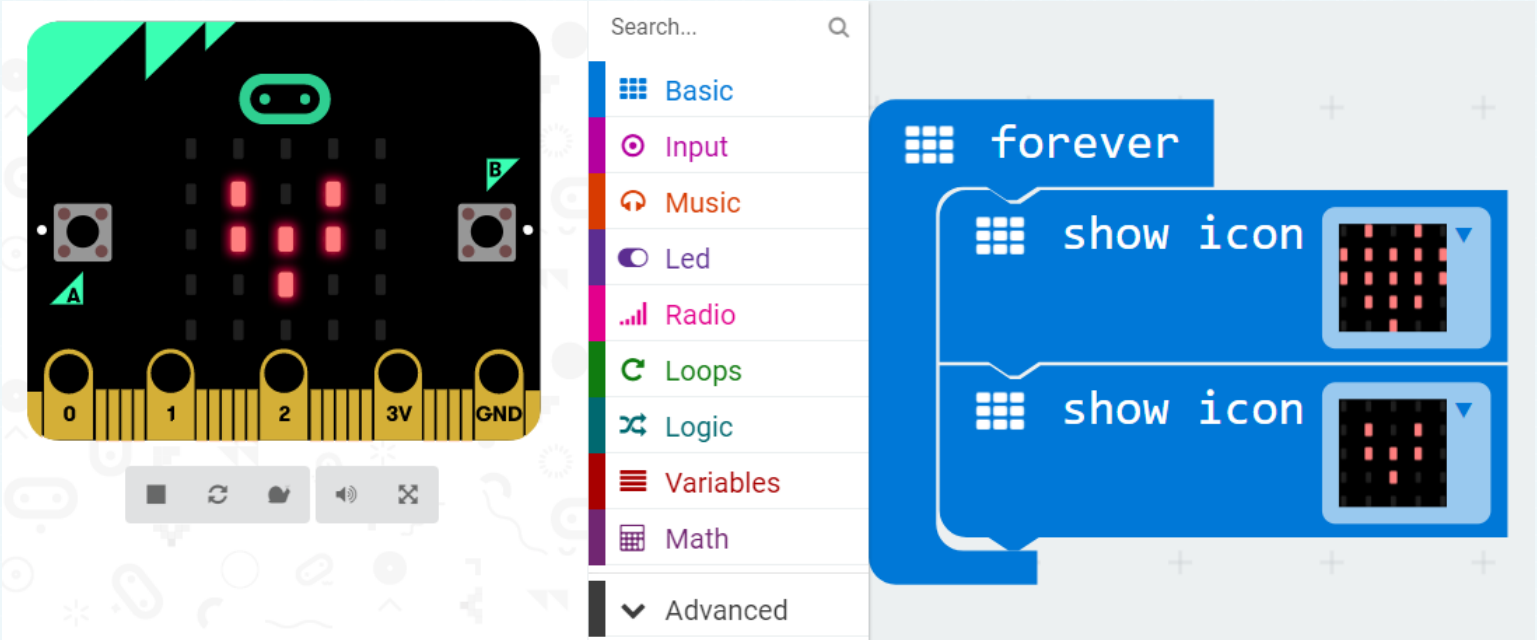
Part 3

Search for blocks



Part 4

Combine blocks



Part 5

Have a try

Do you learn the course today?
If you learn to do it, give yourself a top quack. 
Now give you a homework assignment.

On the micro:bit LED lattice that we just finished the heart beat, we light a circle, a triangle, a rectangle.

Start your little brain. Try it. 

Lesson 2

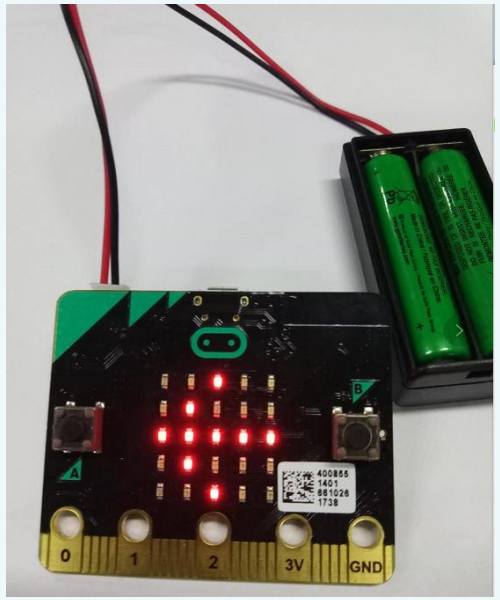
micro:bit basic lesson 2 “See who is pressing fast”

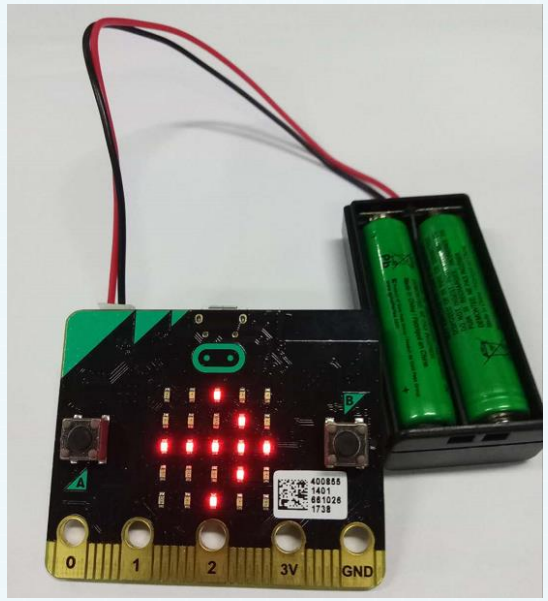
micro:bit entry video tutorial

Content

Part 1

Learning goals





When you download a good program, call your little partner to play. One is standing on the A key, and the other is standing on the B button. And then you count down 3,2,1 and press the button together. If the A button is pressed first, there will be an arrow pointing to the A button on the dot matrix. If the B button is pressed first, there will be an arrow pointing to the B button on the dot matrix. If it is pressed at the same time, it will show a love on the dot matrix.

Part 2

Preparation

Hardware:

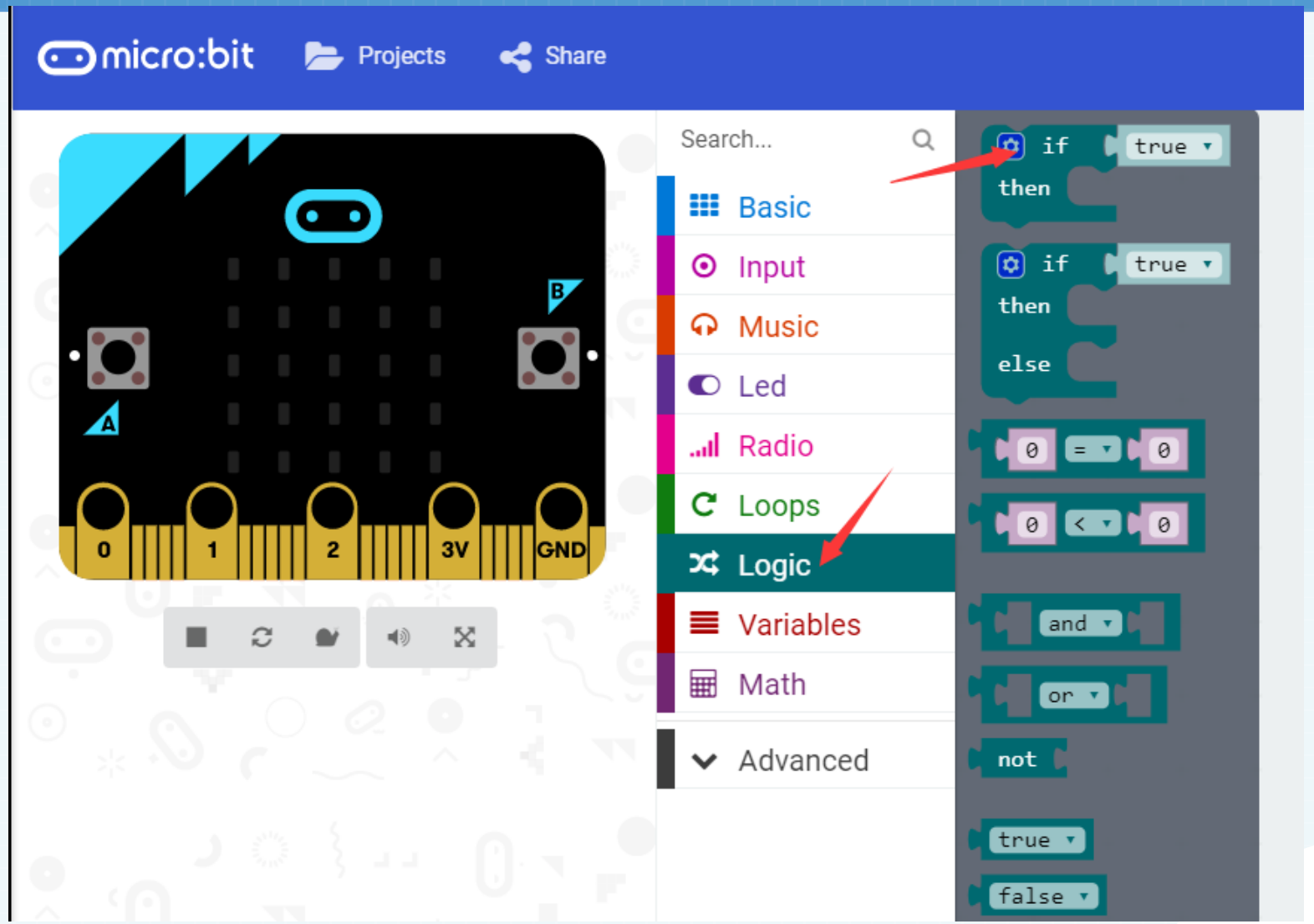
- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

micro:bit entry video tutorial

Part 3

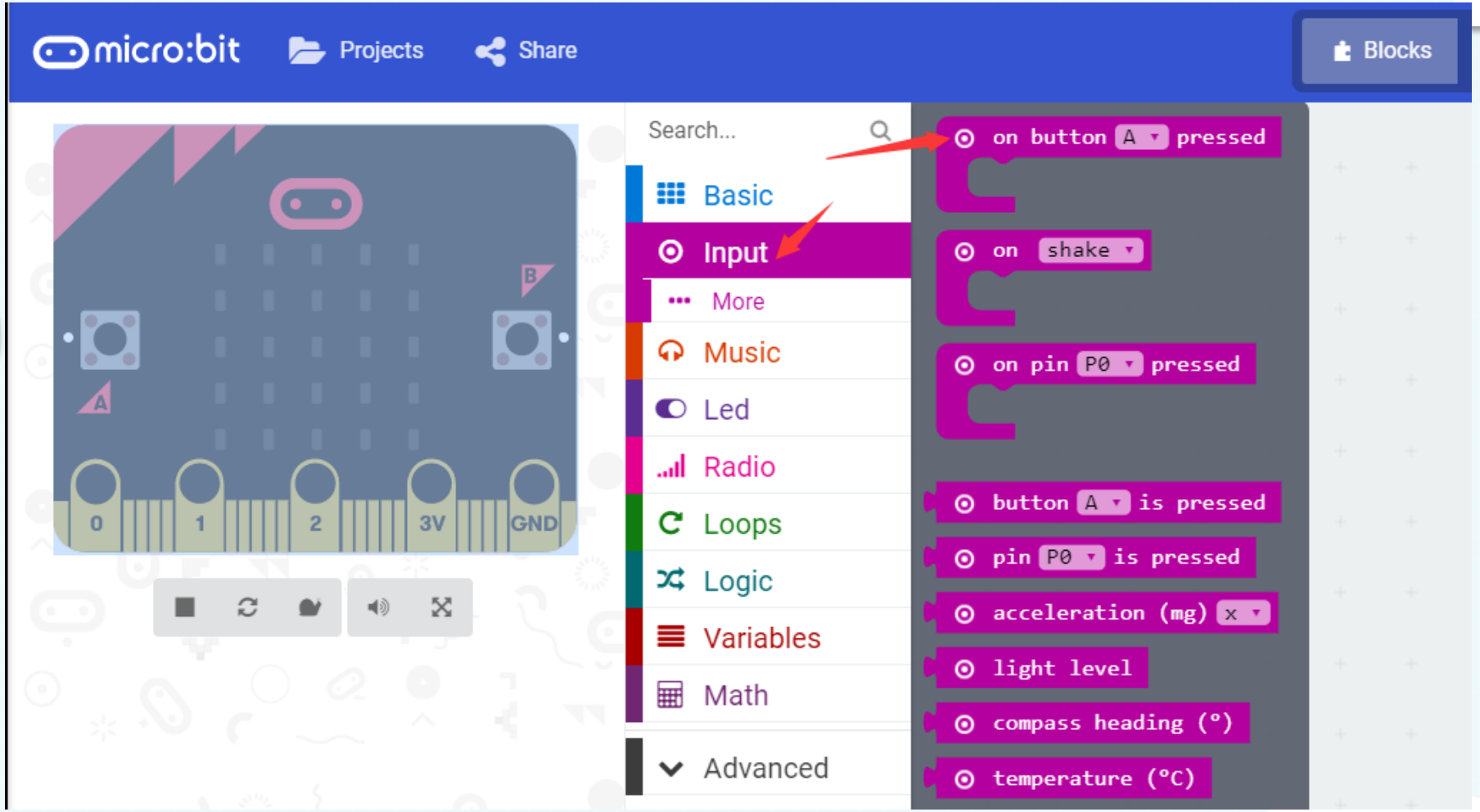
Search for blocks



micro:bit entry video tutorial

Part 3

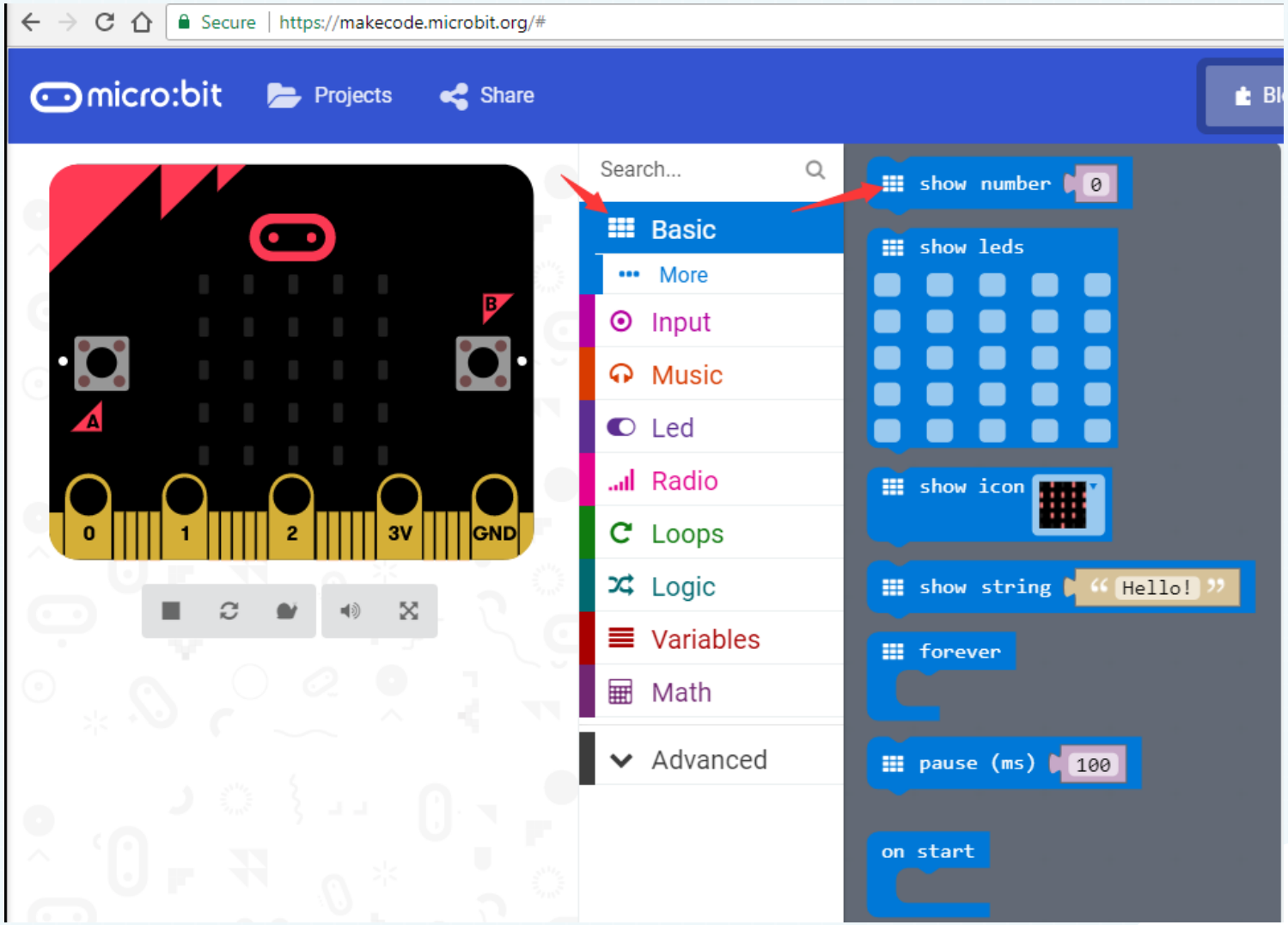
Search for blocks



micro:bit entry video tutorial

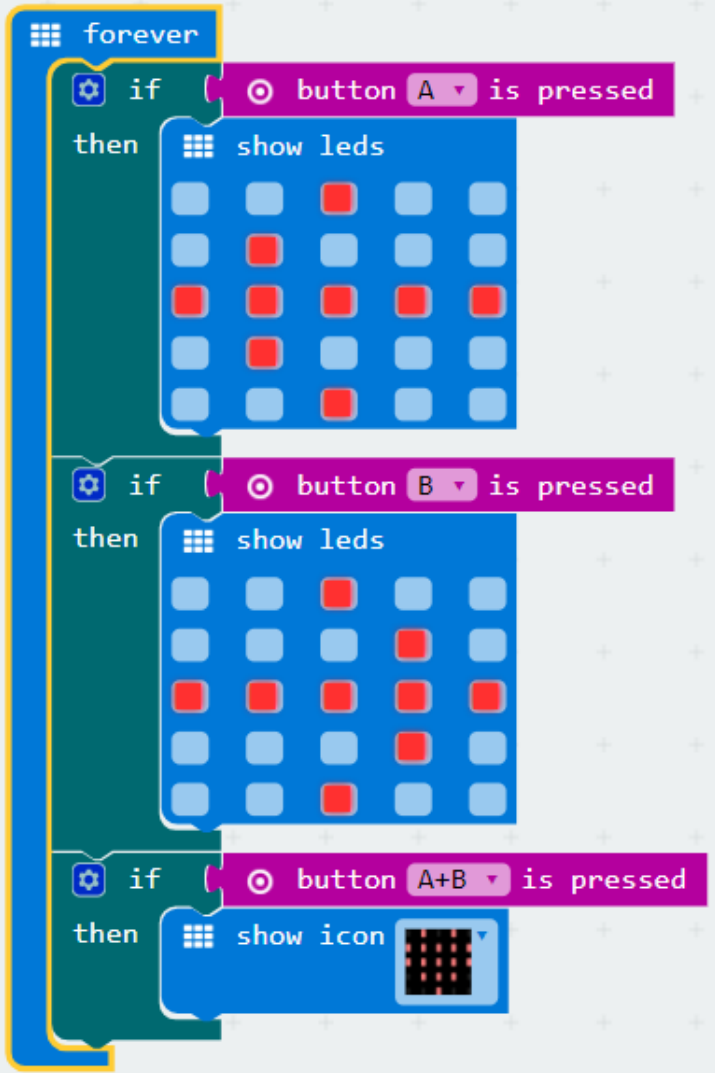
Part 3

Search for blocks



Part 4

Combine blocks



Part 5

Do you learn the course today?
If you learn to do it, give yourself a top quack. 
Now give you a homework assignment.

Have a try

On the micro:bit dot matrix, press the A button, the heart starts to beat, press the B button, and the heart stops beating. You can relate the content of this lesson to the first lesson.

Start your little brain. Try it. 

Lesson 3

micro:bit basic lesson 3 “Flowing sand”

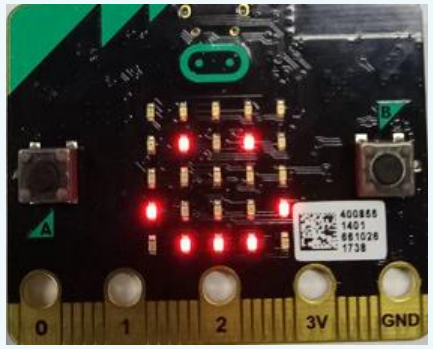
micro:bit entry video tutorial

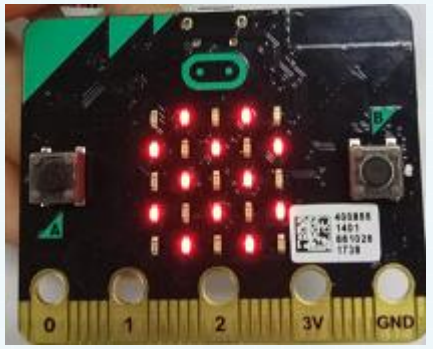
Content

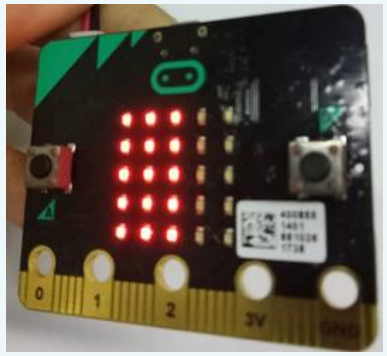
micro:bit entry video tutorial

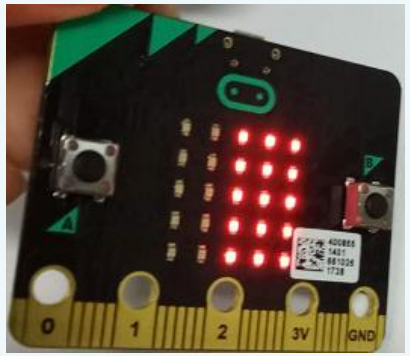
Part 1

Learning goals









When you download the program, the micro:bit board will show a smile first when it is put up (the dot matrix is facing up). Shake can show a plate of sand. Tilt to the left and the sand sink to the left, tilt right and to right, tilt down and to the bottom, tilt to up and to above. Look at it, it's not like a flow of sand?

Part 2

Preparation

Hardware:

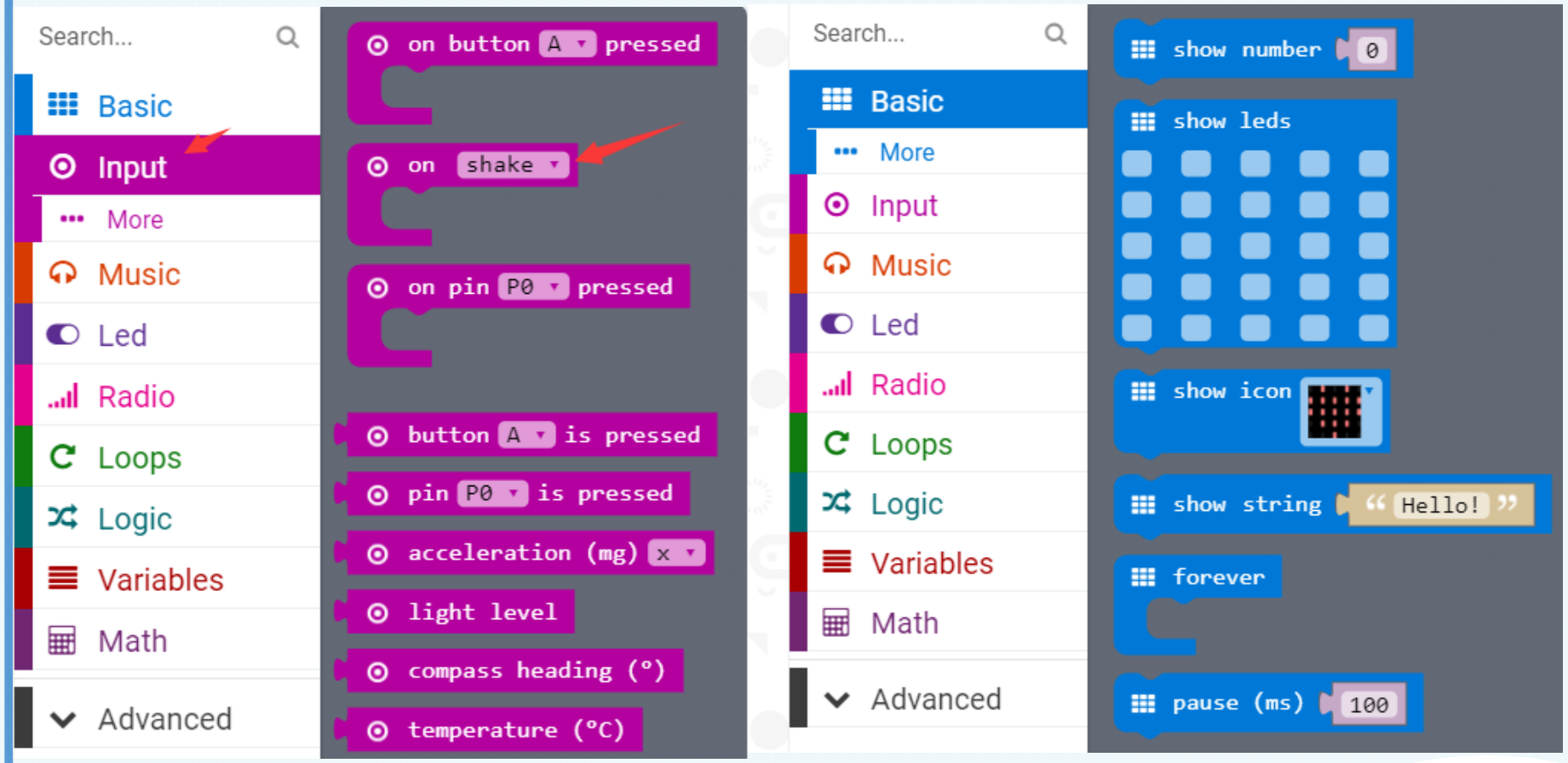
- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

micro:bit entry video tutorial

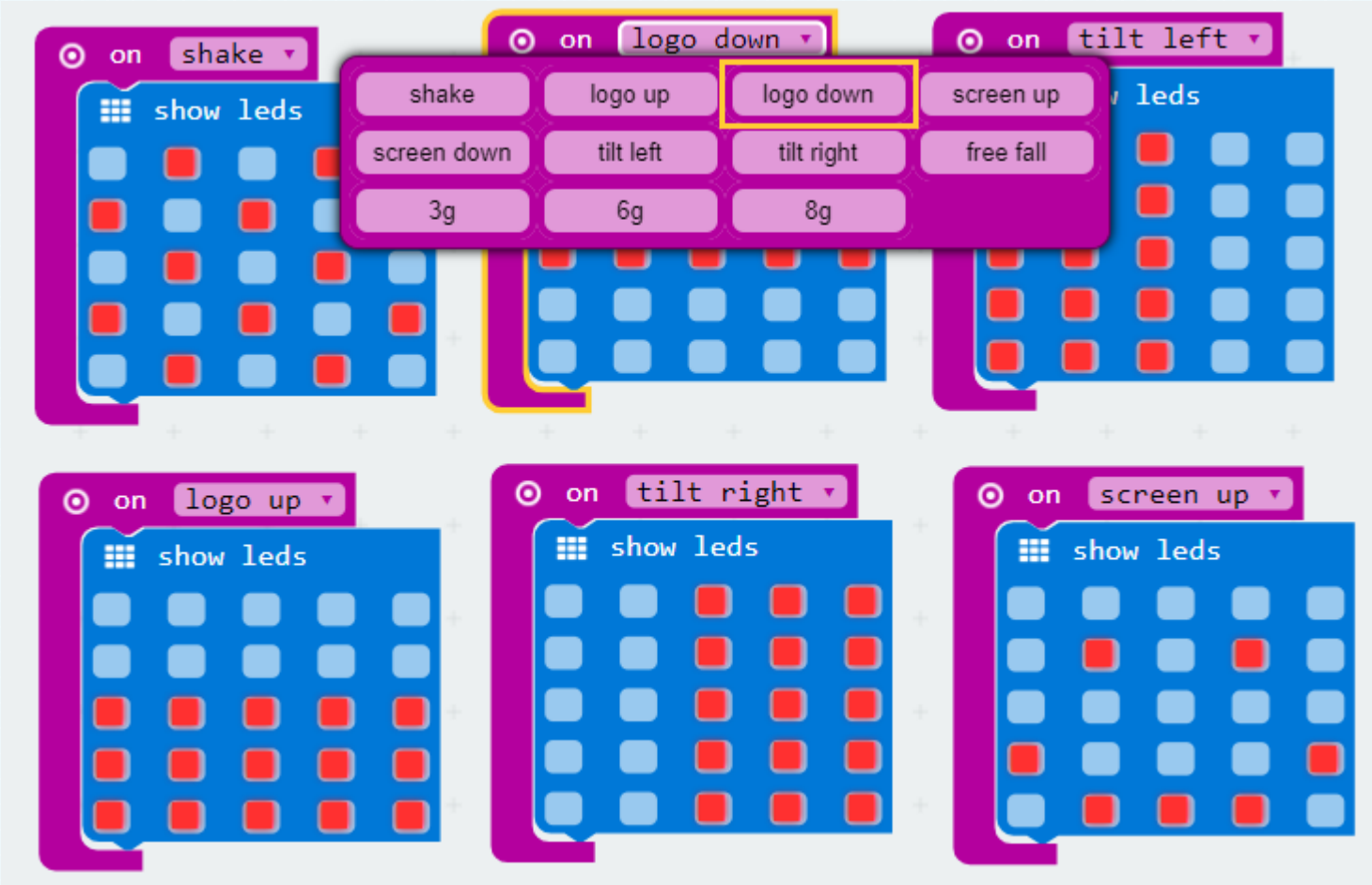
Part 3

Search for blocks



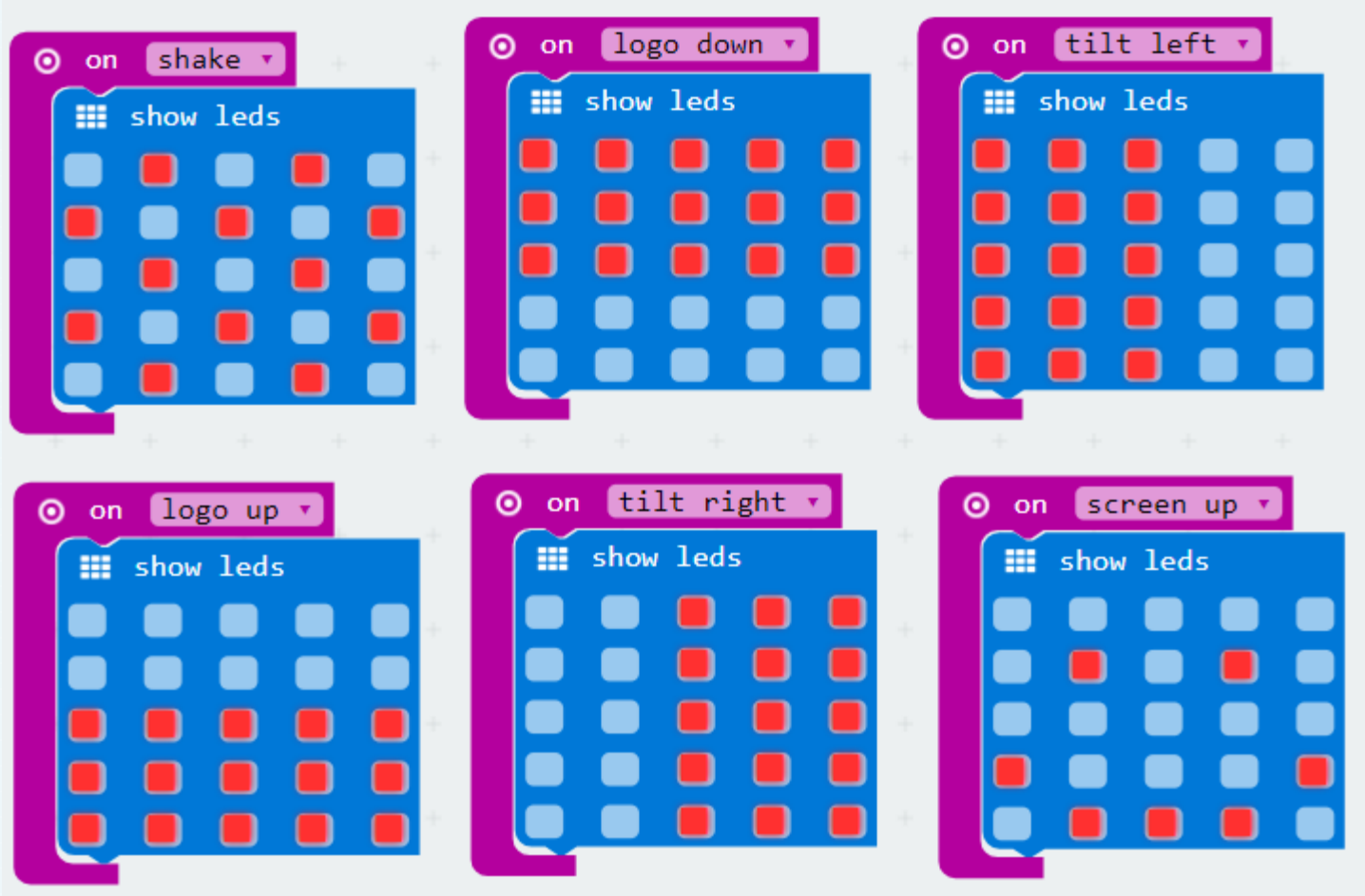
Part 3

Search for blocks



Part 4

Combine blocks



Part 5

Do you learn the course today?
If you learn to do it, give yourself a top quack.

Now you have learned how to use the accelerometer in micro:bit.
Do you know how the content of this lesson is actually achieved?

Tips

Accelerometer is used to measure the deflection of physical quantities, such as tilt inversion and other azimuth deflection. It can accurately determine the actual actions of users, and send some instructions to micro:bit through these actions he collected. There are many places involved in accelerometer. For example, we can make some small games with accelerometer.For example, dice game, snake game is achieved through micro:bit accelerometer.

Lesson 4

micro:bit basic lesson 4 “DIY thermometer ”

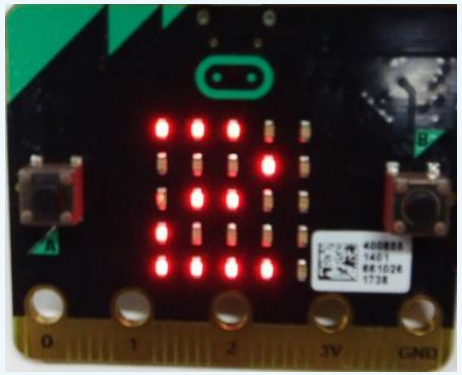
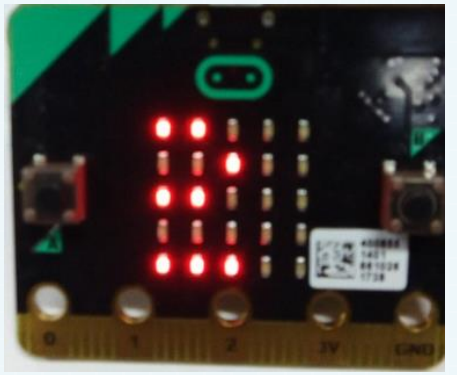
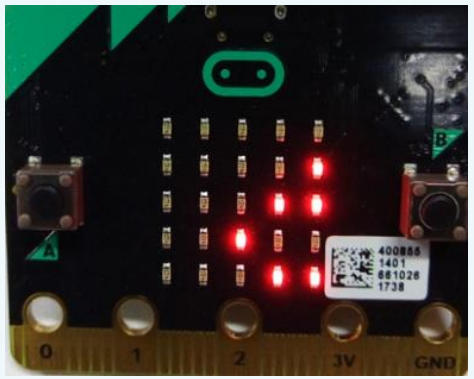
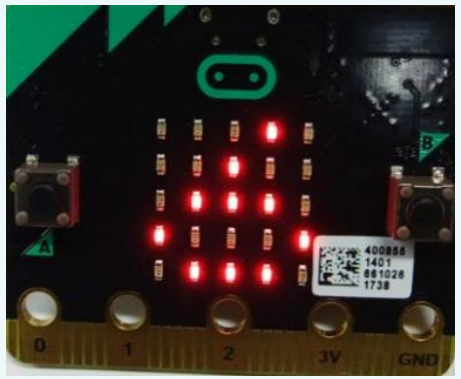
micro:bit entry video tutorial

Content

micro:bit entry video tutorial

Part 1

Learning goals

After you have downloaded the program, you can see the value of the temperature on the micro:bit's dot matrix to the left. At present, the teacher has measured the temperature of 26 degrees Celsius. The students can try to see how much the temperature is around you.

Part 2

Preparation

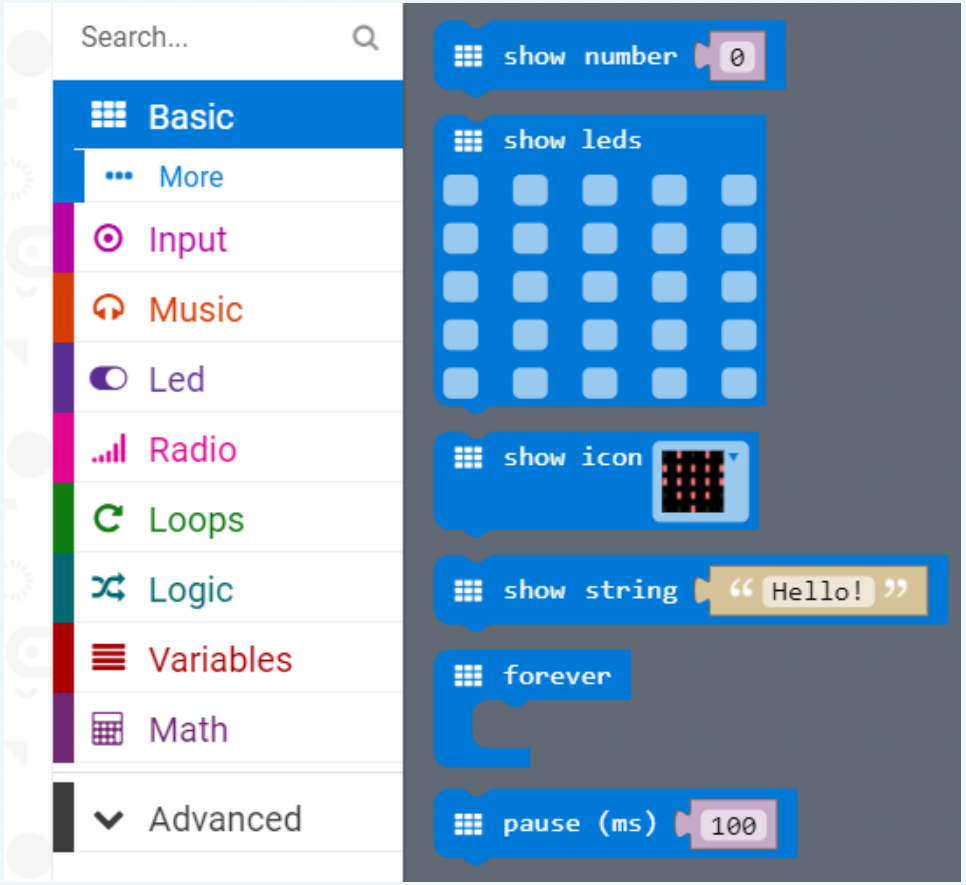
Hardware:

- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

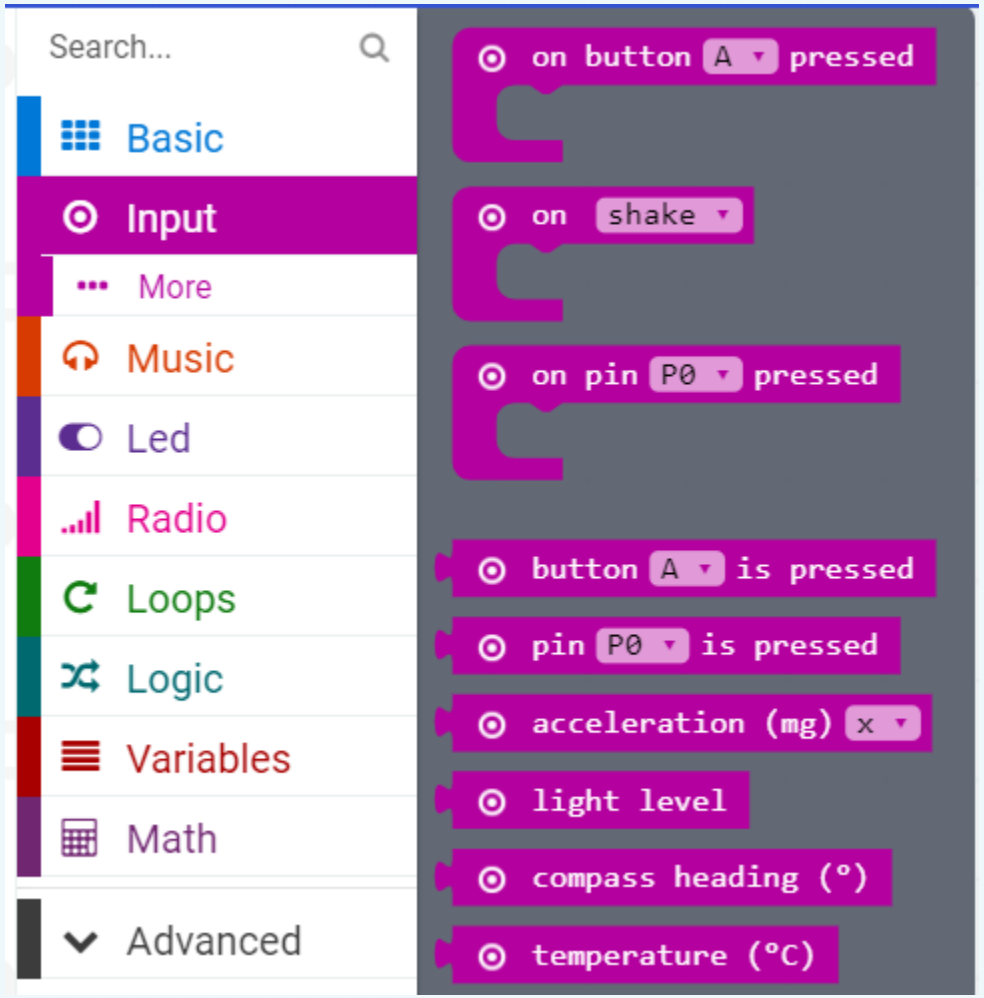
Part 3

Search for blocks



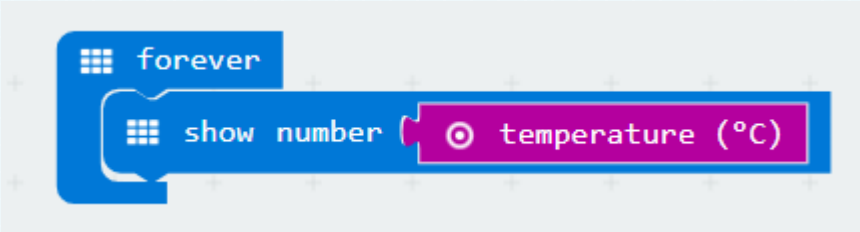
Part 3

Search for blocks



Part 4

Combine blocks



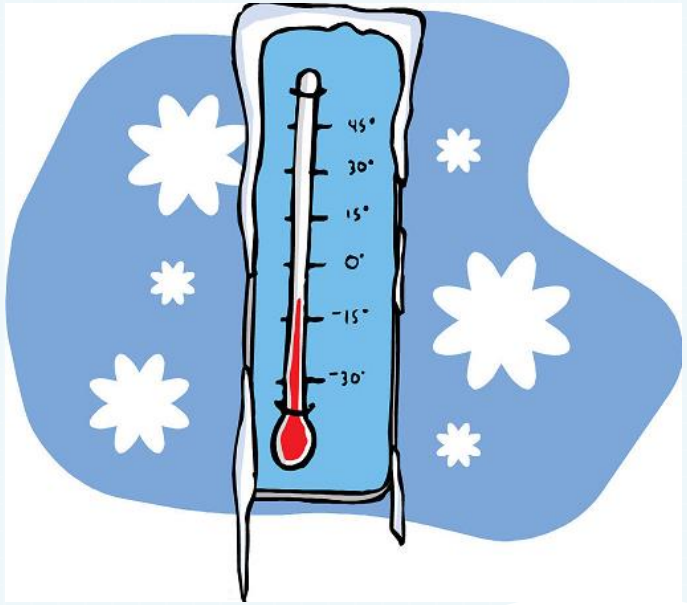
Part 5

Do you learn the course today?
If you learn to do it, give yourself a top quack.

Now you have learned how to use the thermometer in micro:bit.
But do you know what the temperature means?

Tips

Temperature is the physical quantity that represents the degree of cold and heat of a body. Microscopically speaking, it is the intensity of the thermal movement of an object molecule. In this experiment, we measured the Celsius temperature. The inventor was Anders Celsius, the freezing point was 0 degrees, and the boiling point was 99.974 degrees. So what are your temperature now, children?



Lesson 5

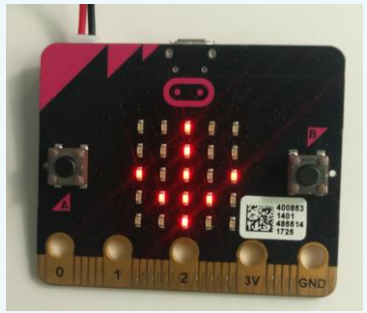
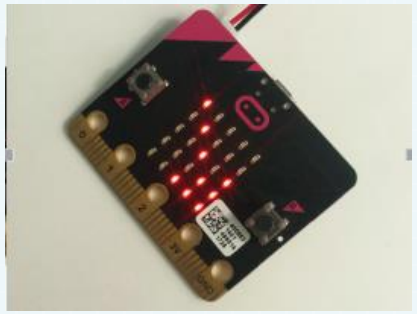
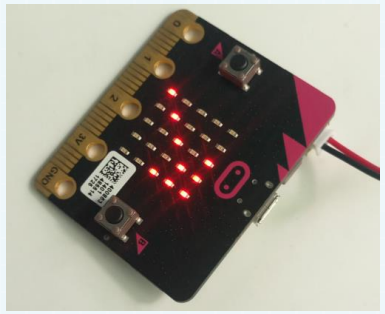
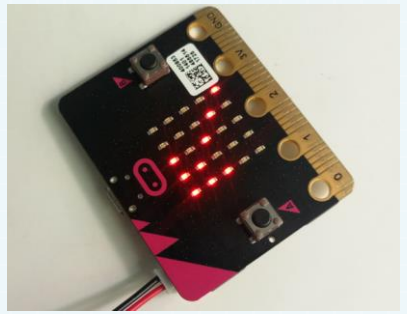
micro:bit basic lesson 5 “Direction follower”

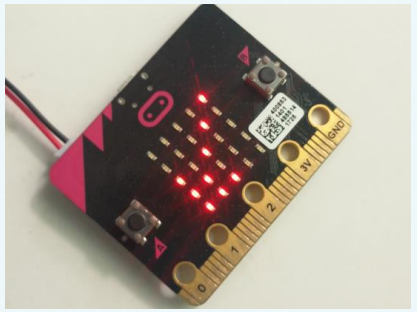
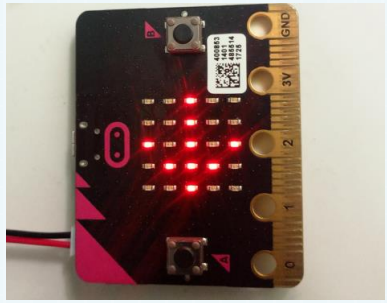
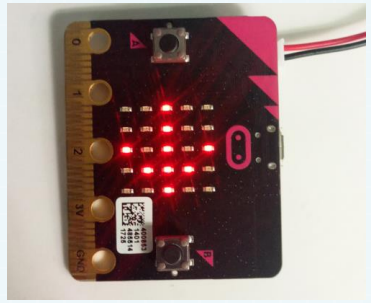
micro:bit entry video tutorial

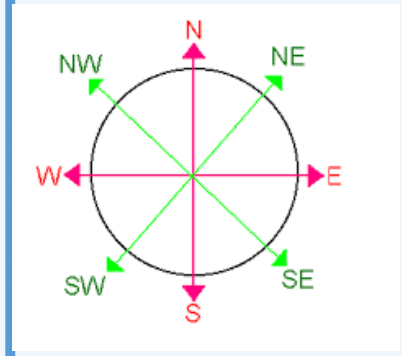
Content

Part 1

Learning goals



After downloading the program, the bit development board can be swung to the east, west, south, north, northeast, northwest, southeast, southwest eight different directions. You can see that no matter which direction the micro:bit swings, the pointer on the dot will point to this direction.

Part 2

Preparation

Hardware:

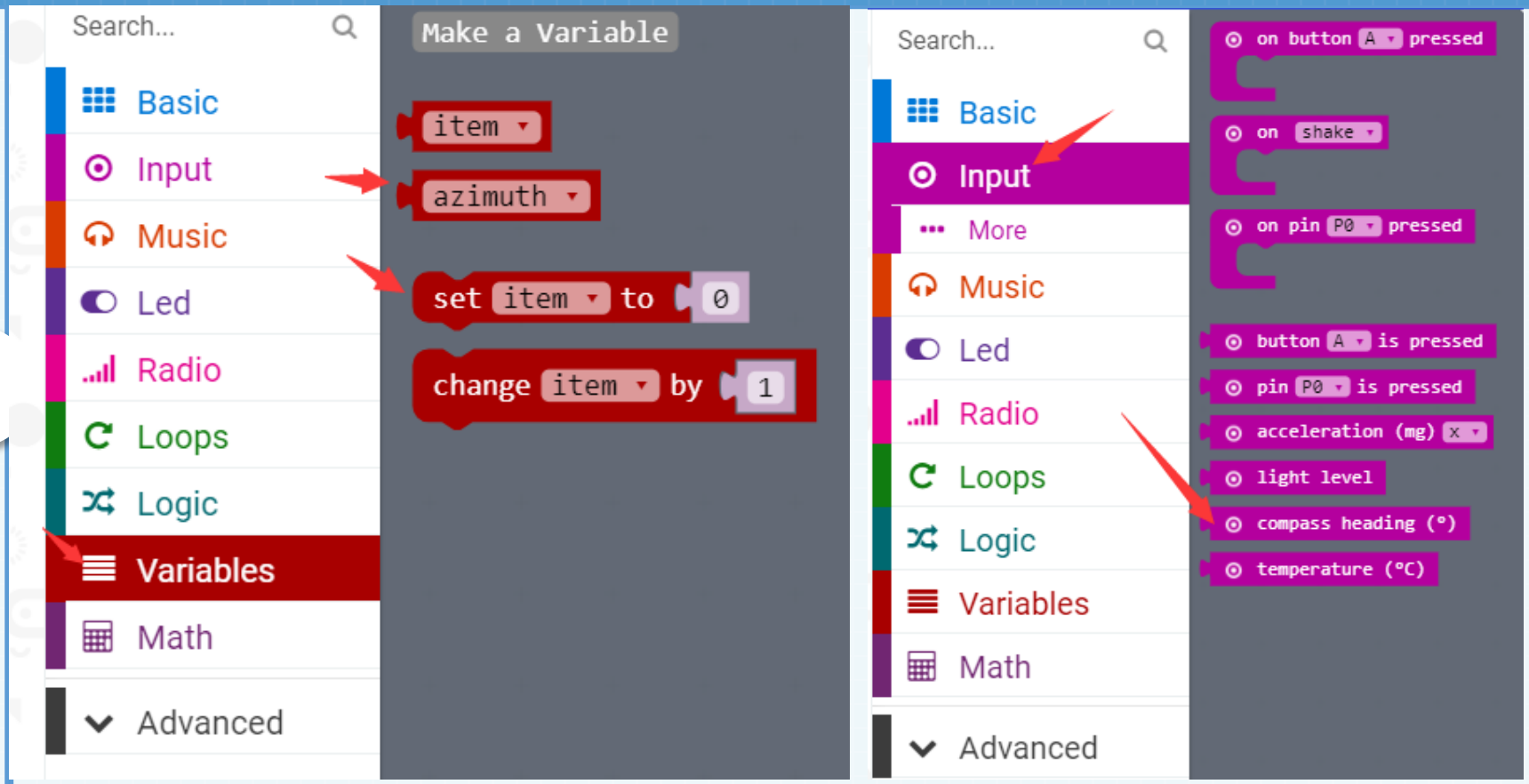
- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

micro:bit entry video tutorial

Part 3

Search for blocks

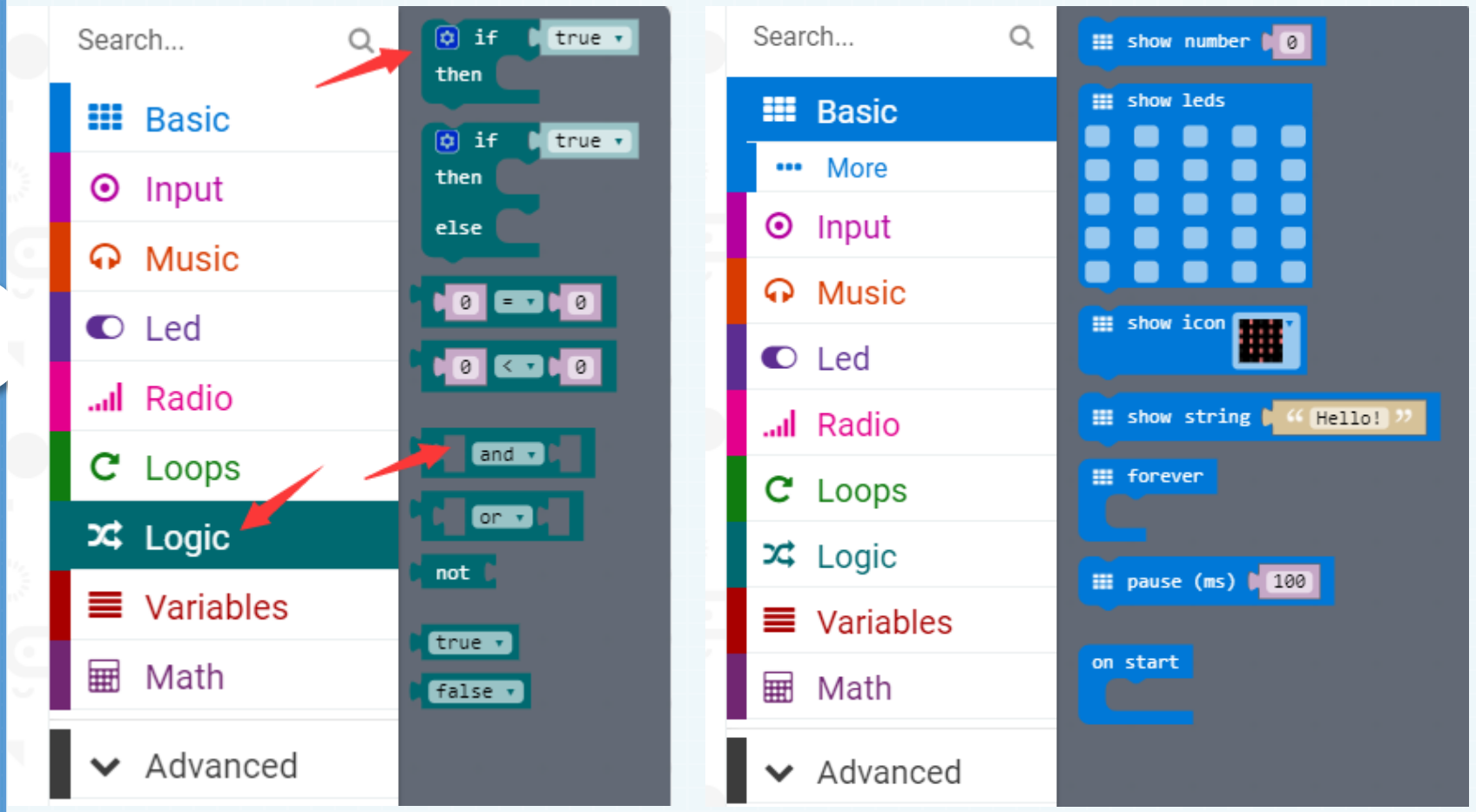


compass heading "the direction of the compass",
In micro:bit, we use the degree to indicate its direction by default.

micro:bit entry video tutorial

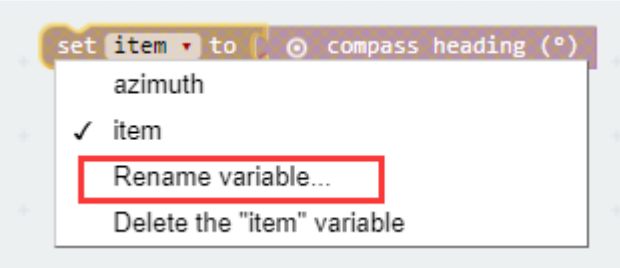
Part 3

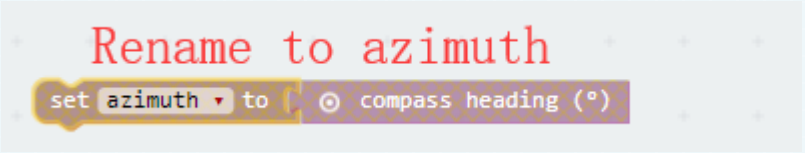
Search for blocks

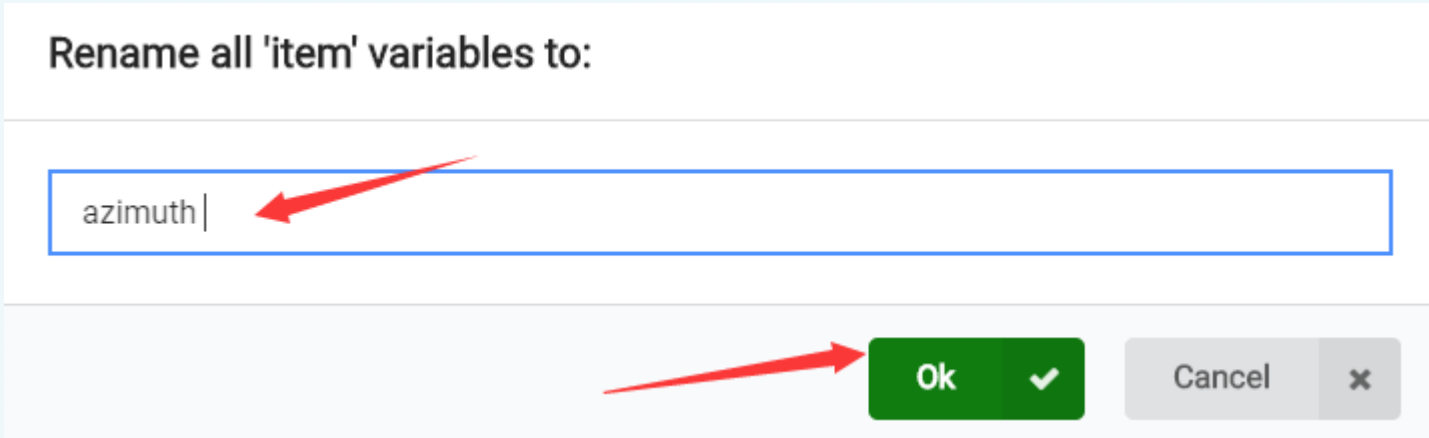


Part 3

Search for blocks

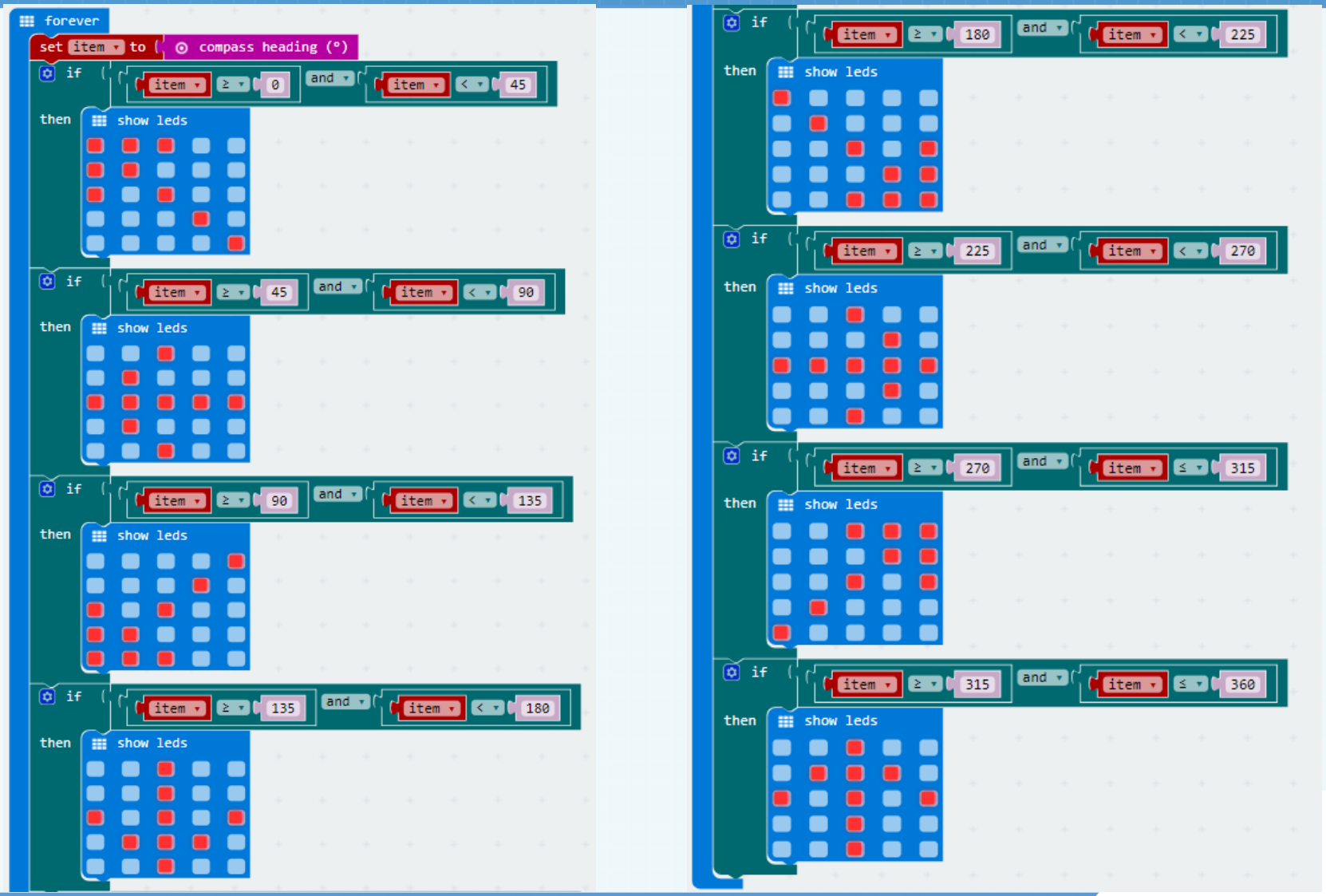






Part 4

Combine blocks



◆The right blocks follow with the left

Part 4

!!!Note

After downloading the program, we need to calibrate the compass for normal use.
The calibration method is:
We need to bias the micro:bit in different directions, illuminate all the LED lights on the LED dot matrix, and a smile appears, indicating that the calibration is successful. We can use the micro:bit compass normally.

Part 5

Have a try

Do you learn the course today?
If you learn to do it, give yourself a top quack. 
Now give you a homework assignment.
Today, our content is a simple compass, the compass is one of the four great inventions of ancient China. Let's go and find out what the other three of the four great inventions of ancient China are.

Start your little brain. Try it. 

Lesson 6

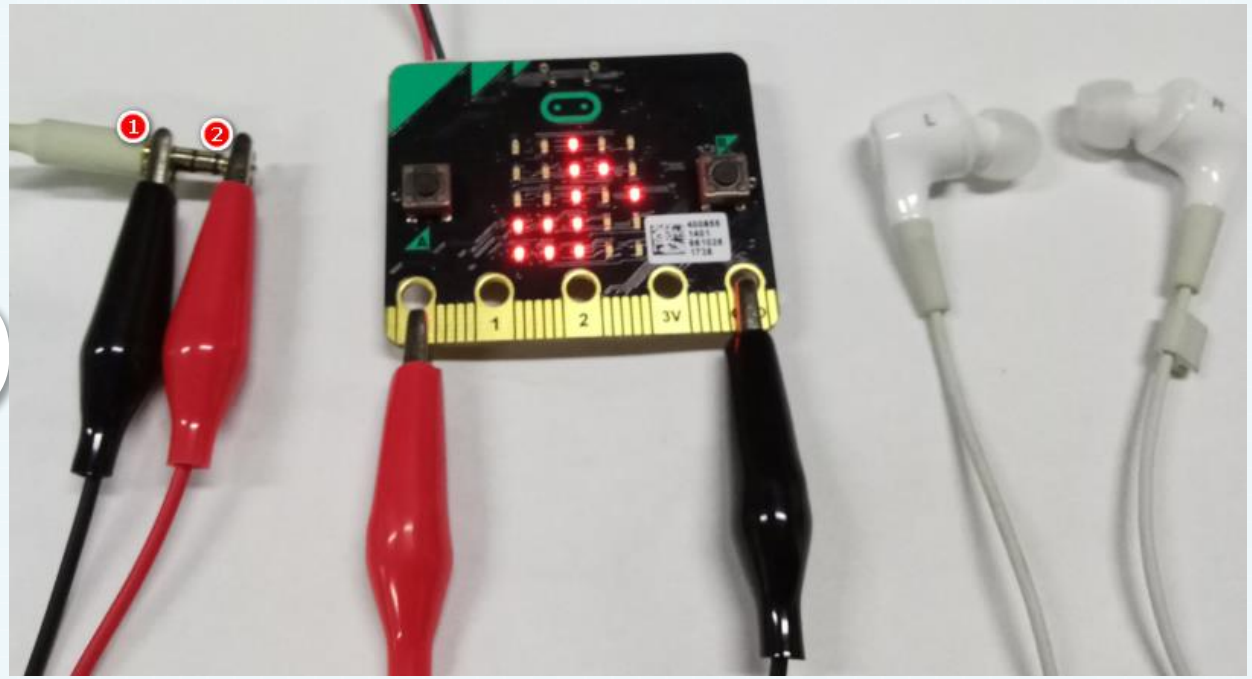
micro:bit basic lesson 6 “Listen to music”

micro:bit entry video tutorial

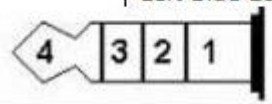
Content

Part 1

Learning goals



PIN	Description
1	Ground
2	Microphone
3	Right Side Earpiece
4	Left Side Earpiece



You need two crocodile clips and a pair of headphones for this experiment.

First, the black crocodile clip is used to clamp the GND of micro:bit, and the black crocodile clip on the other side clamps the interface of the earphone.

Then use the red crocodile clip to clamp P0, and the other end clamps the interface of the earphone 2.After downloading the program, you can play music from the earphone.

Part 2

Preparation

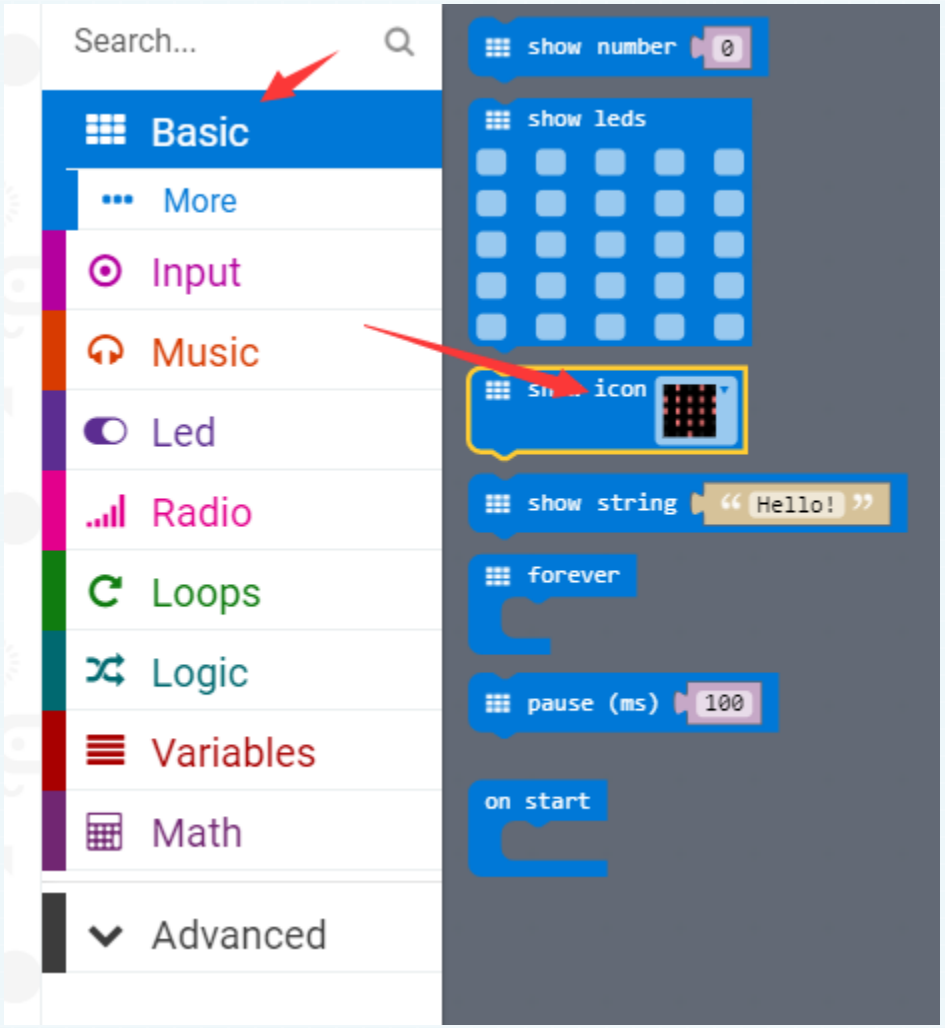
Hardware:

- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X Crocodile clip cable
- 1 X Headphones
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

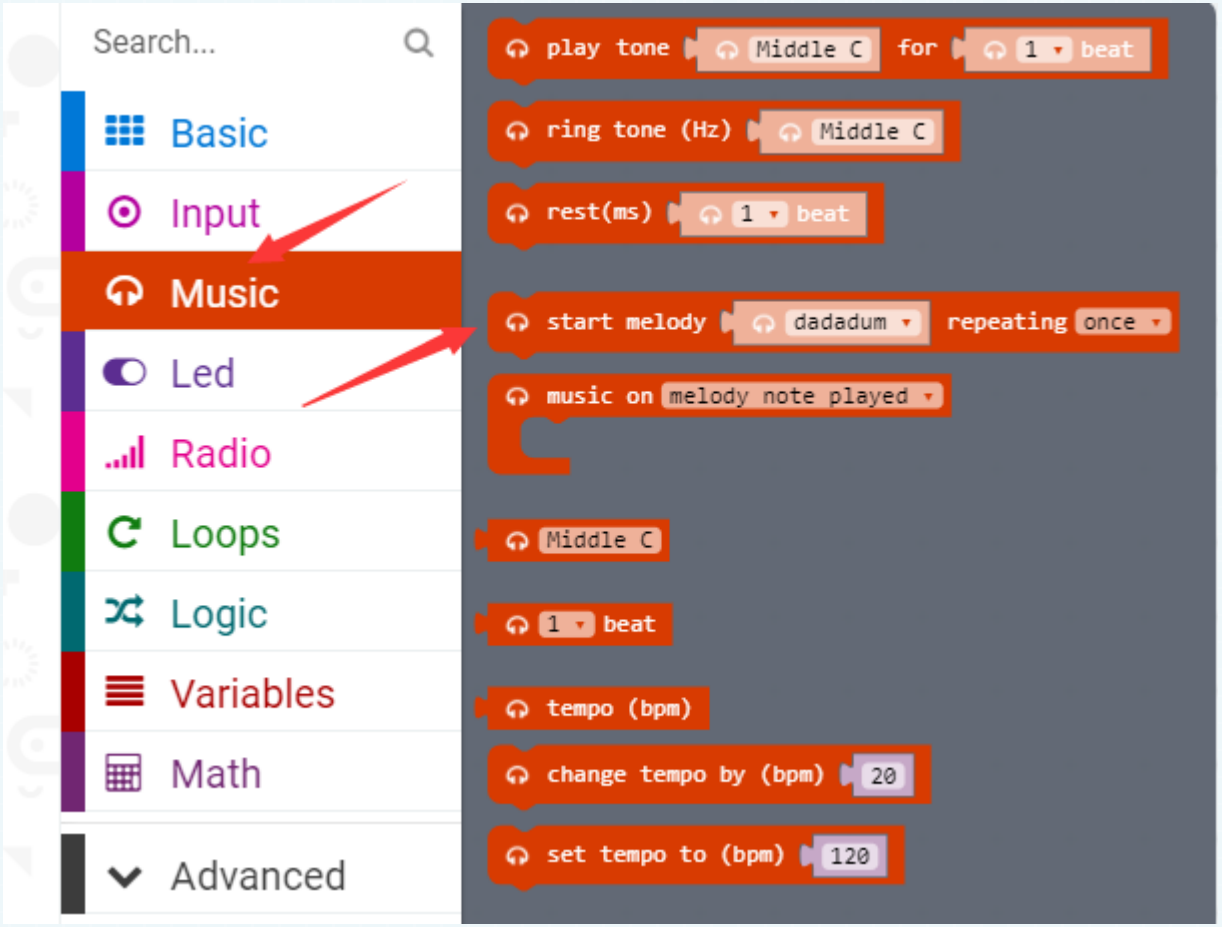
Part 3

Search for blocks



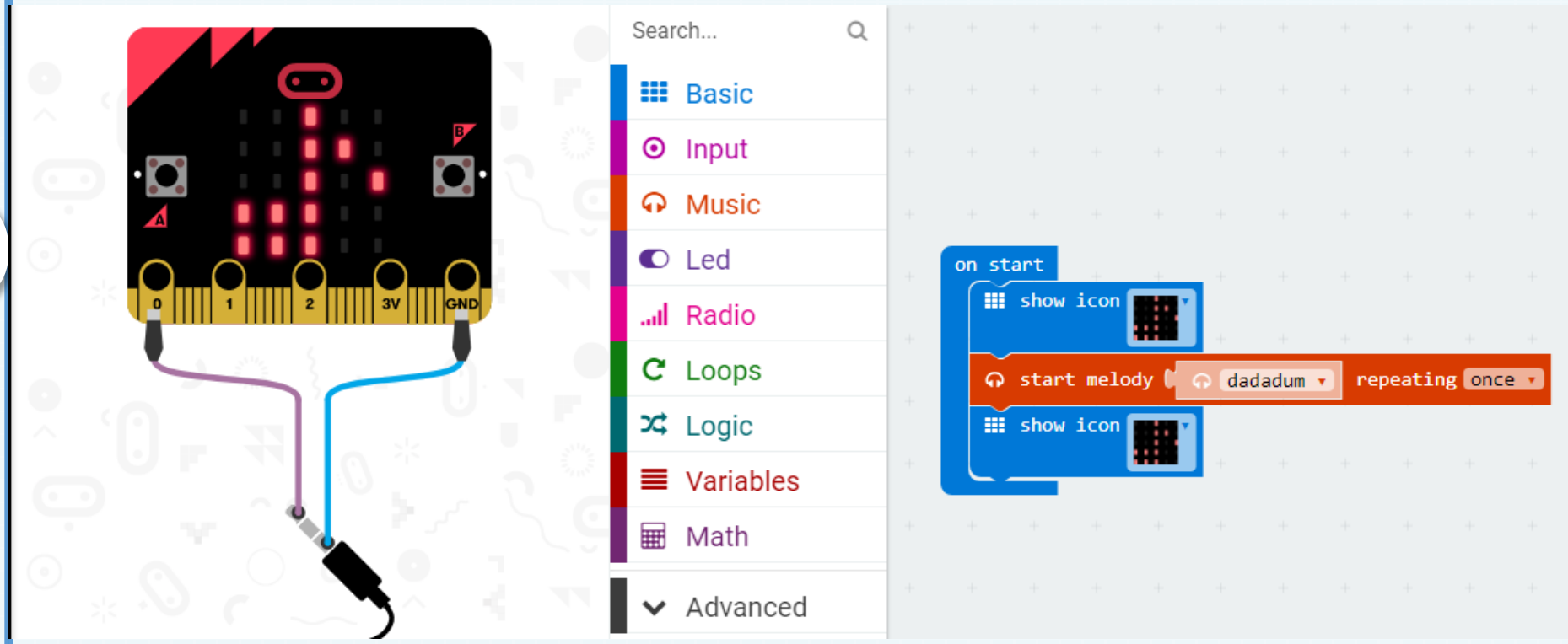
Part 3

Search for blocks



Part 4

Combine blocks



Part 5

Do you learn the course today?
If you learn to do it, give yourself a top quack. 
Now give you a homework assignment.

Have a try

On the basis of the playing music we just realized, plus the function of the key, we play the song after pressing the key, and the name of the song is displayed on the dot matrix.

Start your little brain. Try it. 

Lesson 7

micro:bit basic lesson 7 “Dice game”

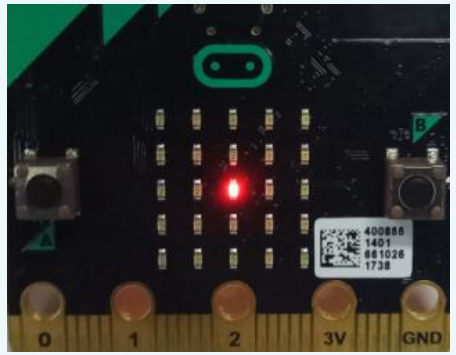
micro:bit entry video tutorial

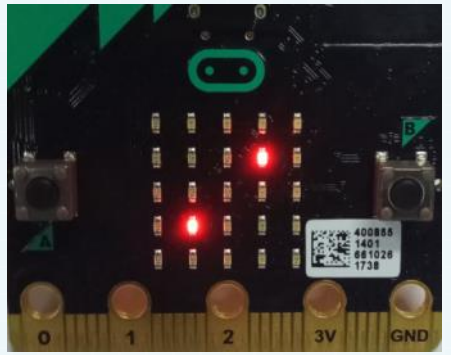
Content

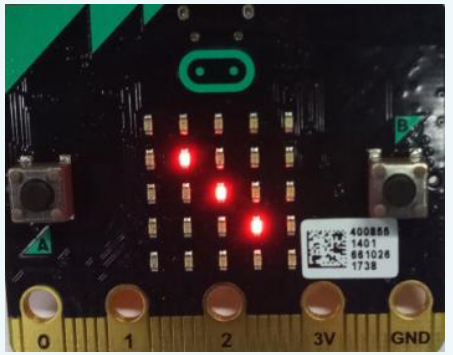
micro:bit entry video tutorial

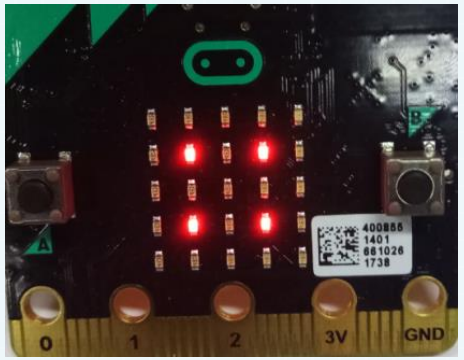
Part 1

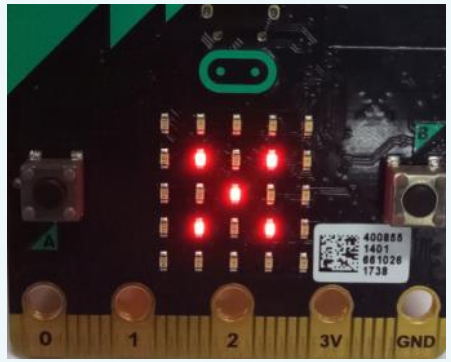
Learning goals

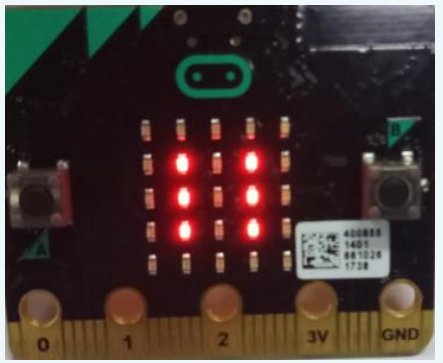












After downloading the program, shake a roll of micro:bit. There are 1-6 points randomly appearing on the dot matrix, which is exactly the same as playing the dice. You can call your buddy to play this game, see who points out relatively large

Part 2

Preparation

Hardware:

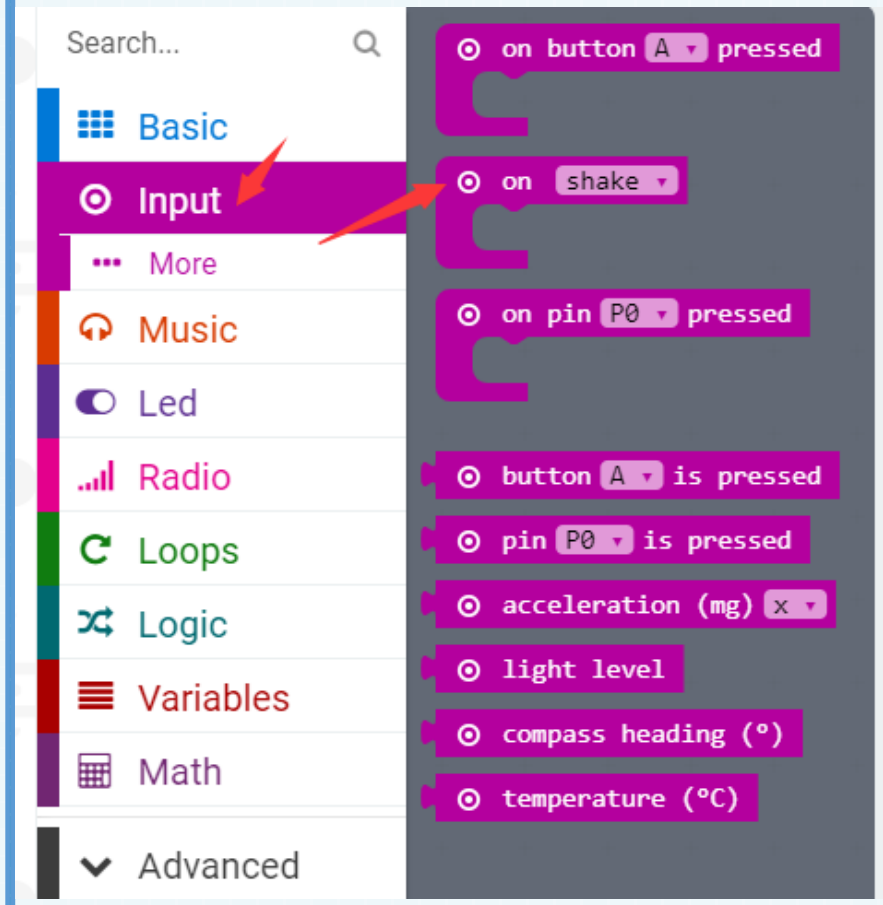
- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

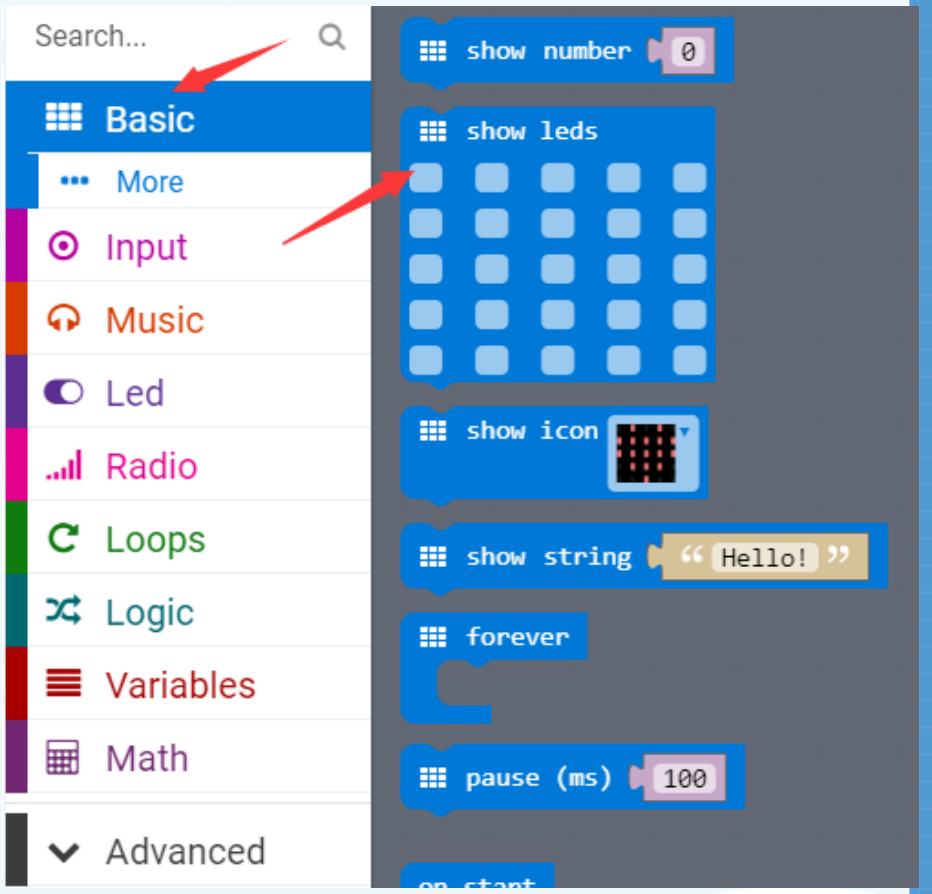
Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

micro:bit entry video tutorial

Part 3

Search for blocks





Part 3

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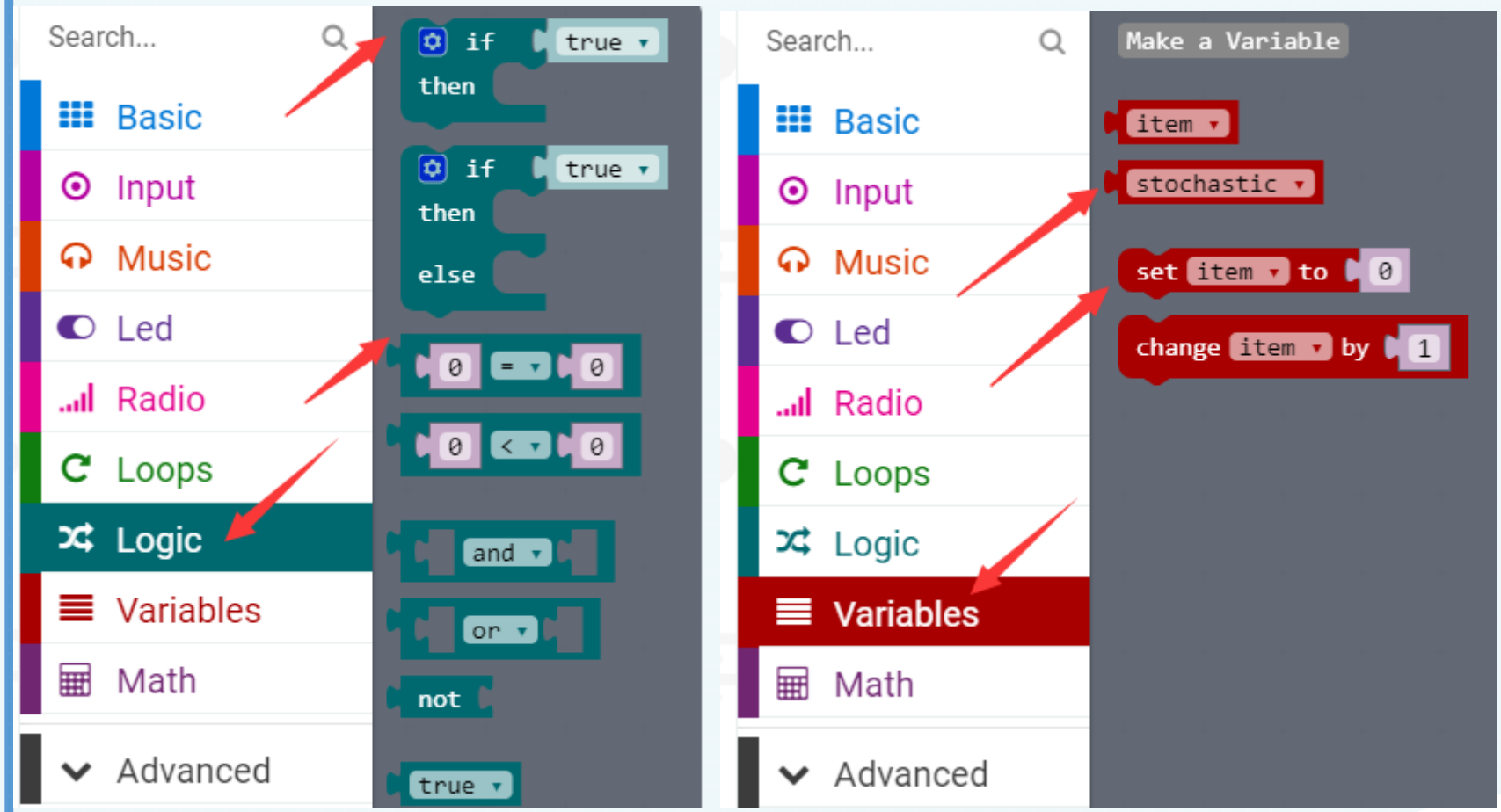
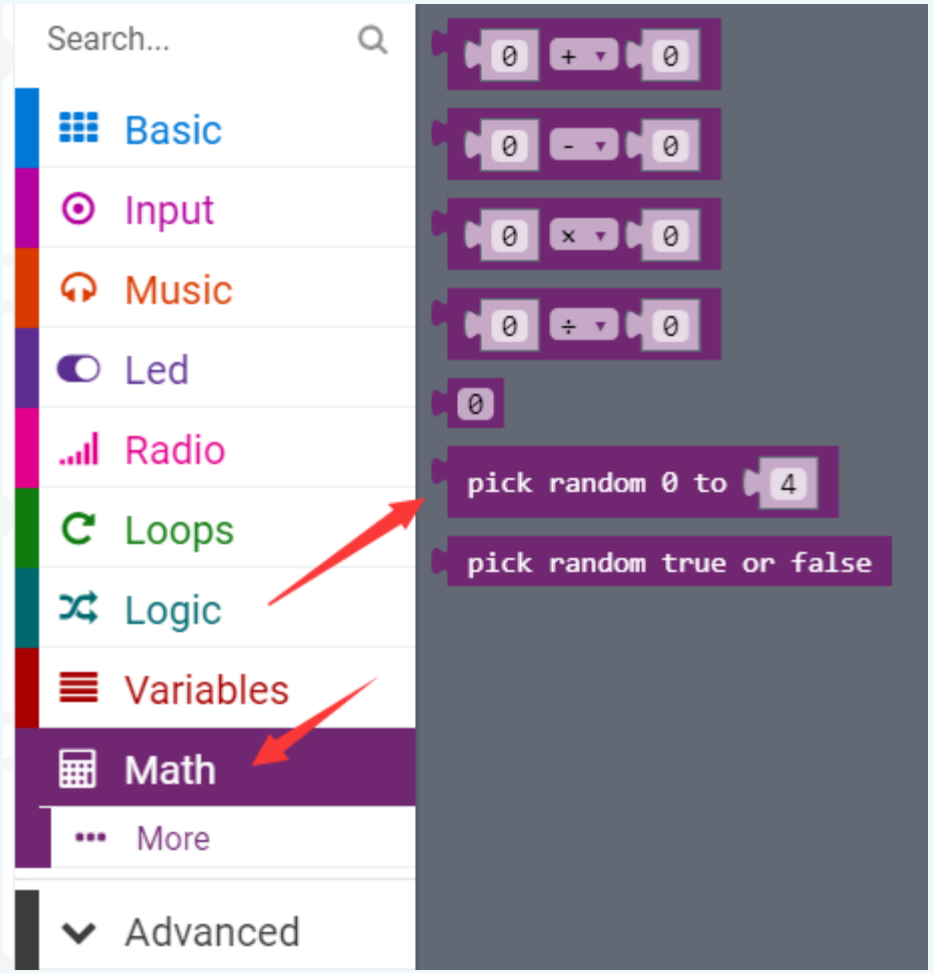


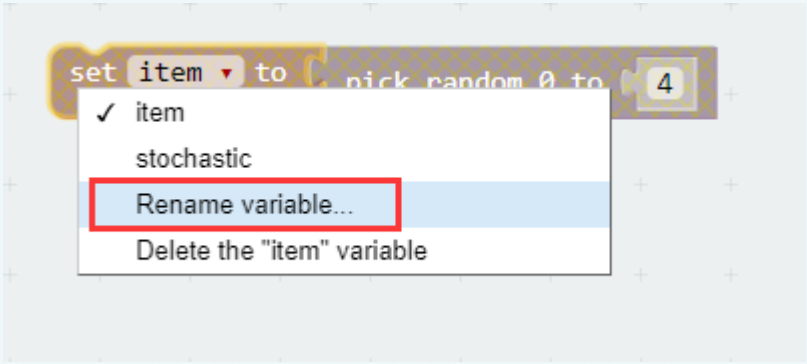
Part 3

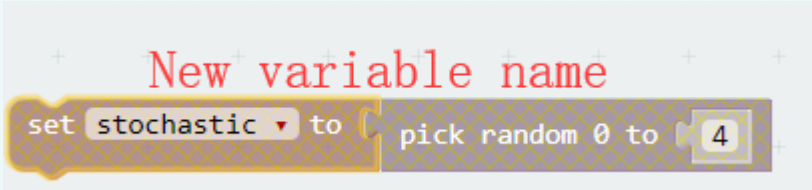
Search for blocks

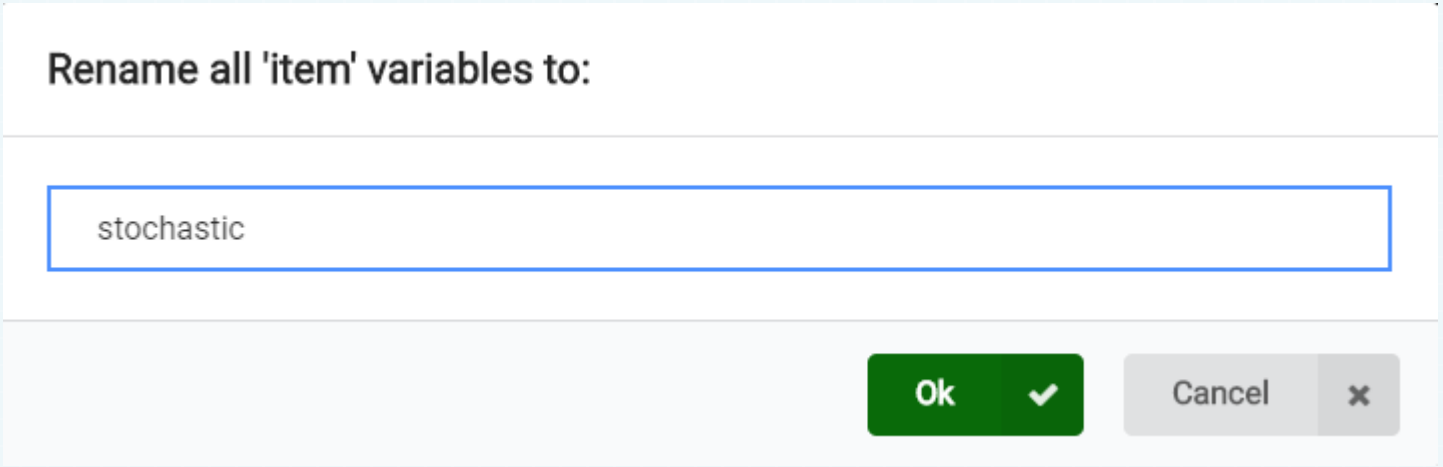


Part 3

Search for blocks

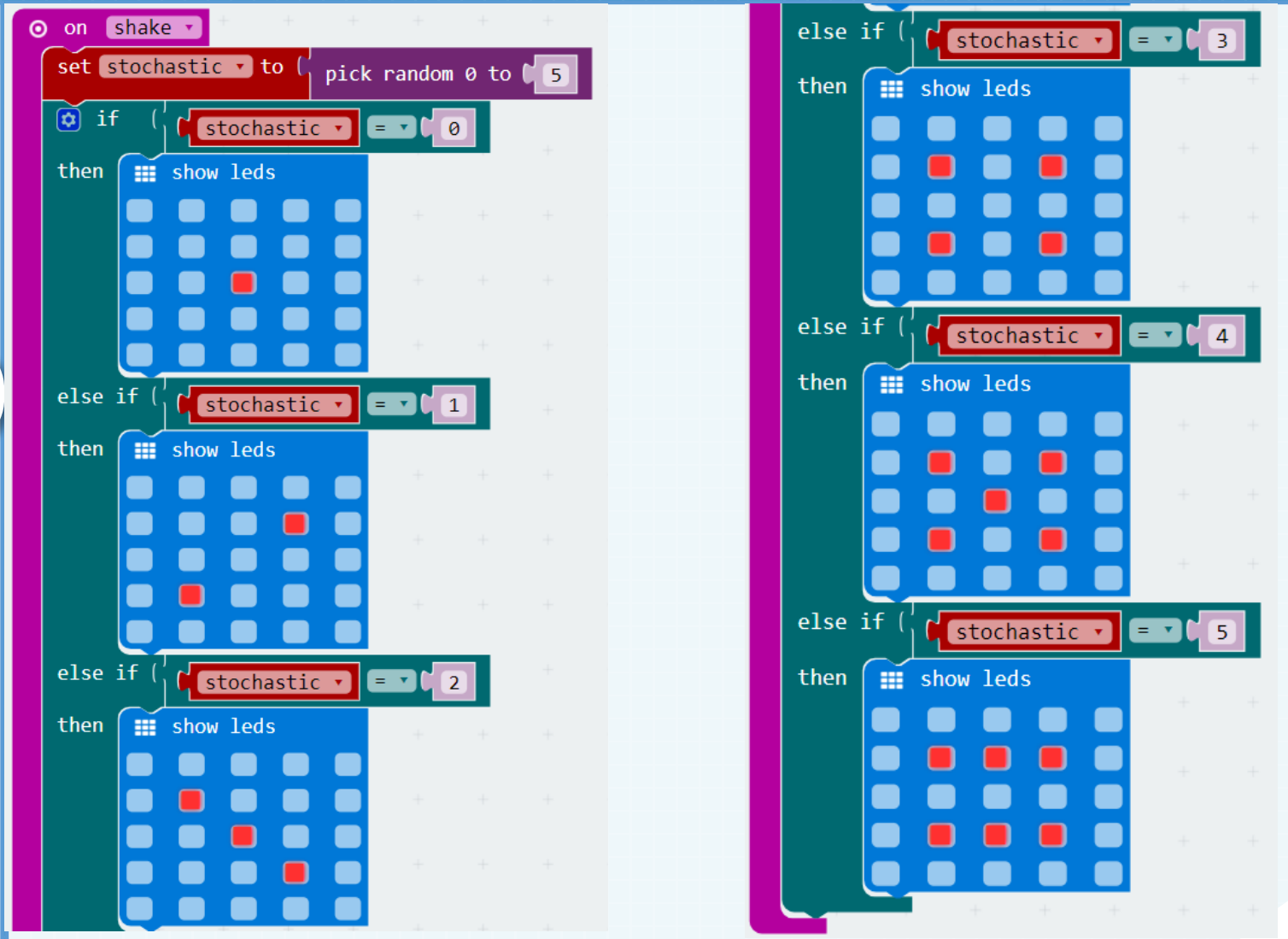






Part 4

Combine blocks



The right blocks follow with the left

Part 5

Have a try

Do you learn the course today?
If you learn to do it, give yourself a top quack. 
Now give you a homework assignment.

On micro:bit, we can play a melody when we shake it.

Start your little brain. Try it. 

Lesson 8

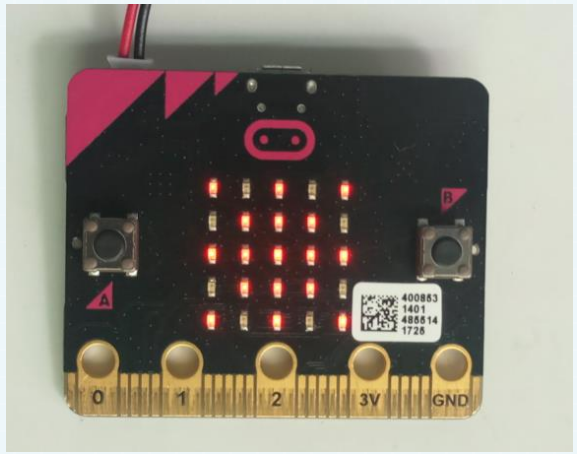
micro:bit basic lesson 8 “Good morning, good night”

micro:bit entry video tutorial

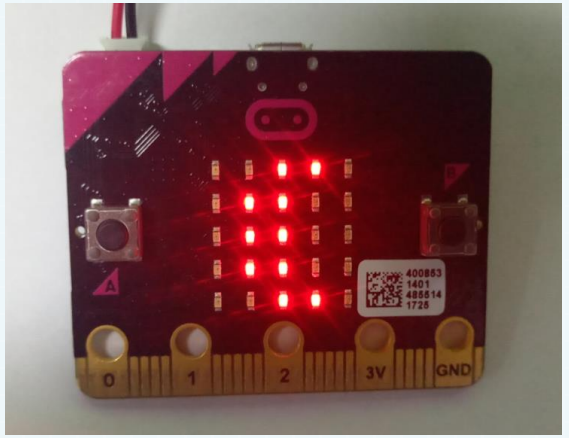
Content

Part 1

Learning goals



Sunlight
(Good morning)



Moon
(Good evening)

After downloading the program,When the micro:bit development board is in the brighter environment, a pattern of the sun will be displayed on the dot matrix, which means to say "good morning" to everyone. similarly, when in a dark environment, the moon pattern will be displayed on the dot matrix, which means to say "good night" to everyone.

Part 2

Preparation

Hardware:

- 1 X Micro: bit Board
- 1 X Micro USB Cable
- 2 X AAA batteries

Then the micro:bit is connected to the computer through USB, and the computer will pop up a U disk and click the URL in the U disk to enter the programming interface.

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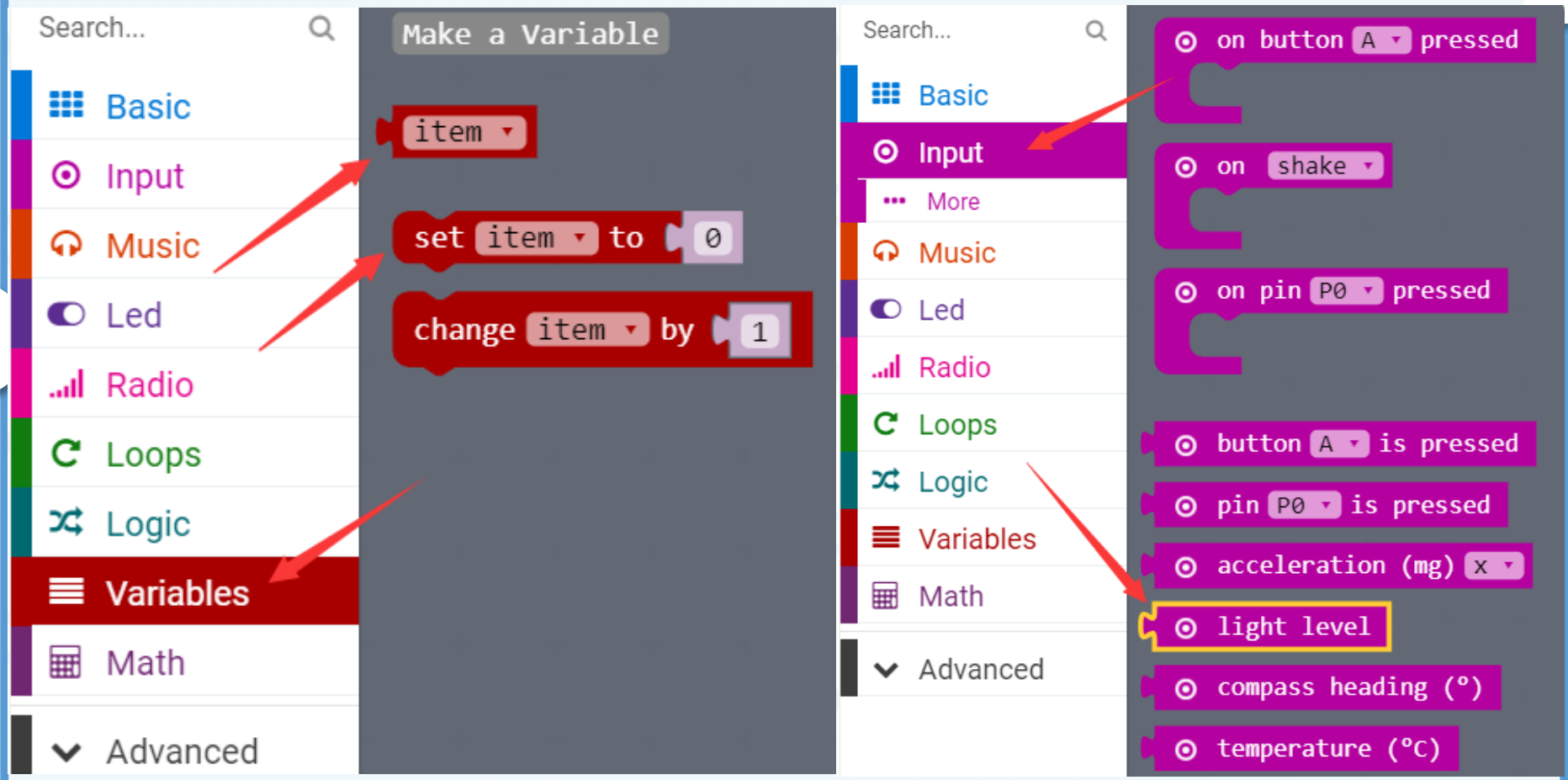
Part 3

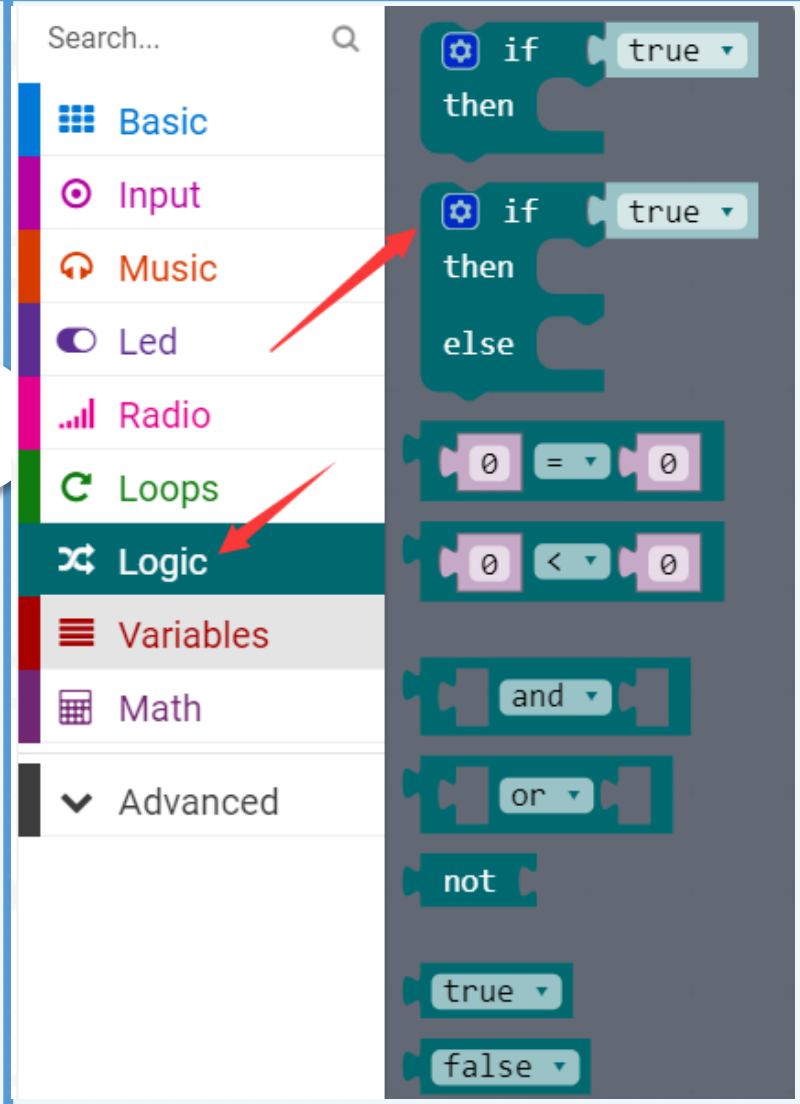
Search for blocks

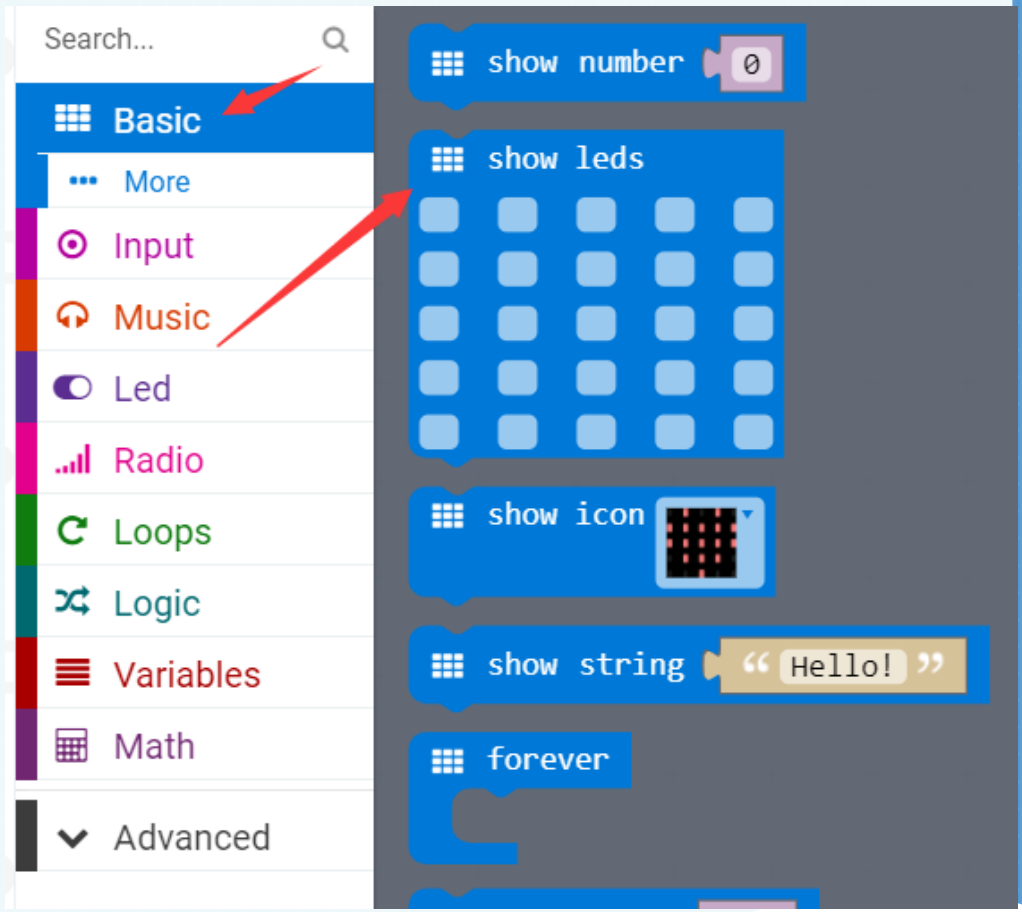


micro:bit entry video tutorial

Part 3

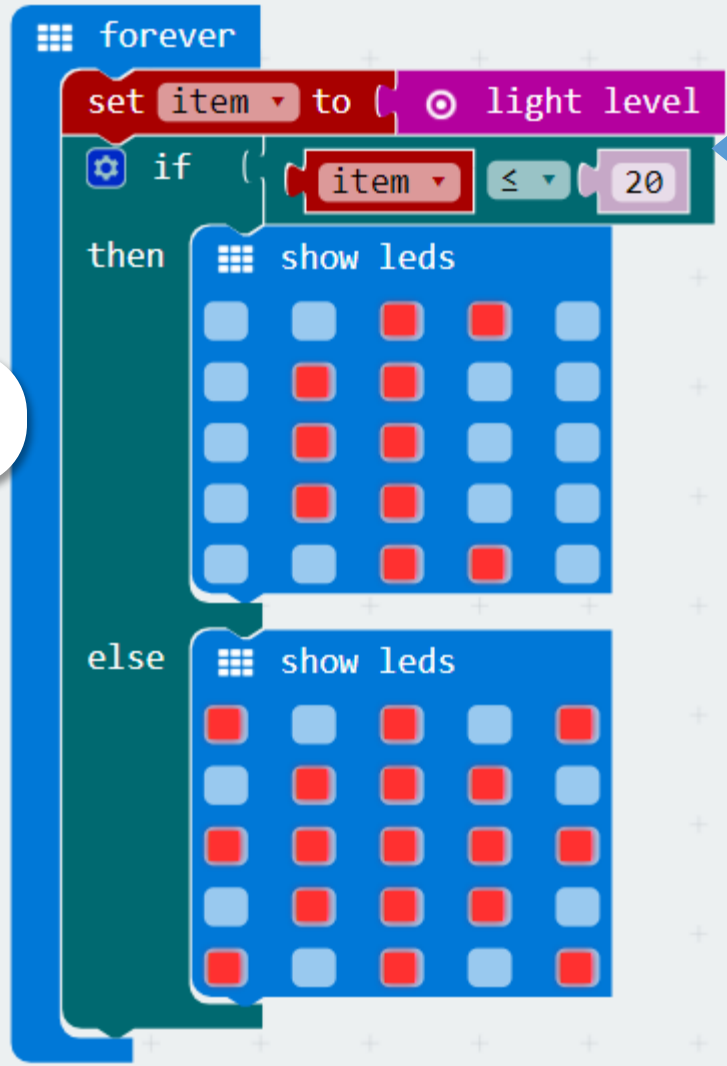
Search for blocks





Part 4

Combine blocks



20 here is an intermediate value set freely,The meaning of building blocks is that:If the current light intensity is less than 20, the moon will appear on the dot matrix. If greater than 20, the sun will appear.

Median value: Put all the numbers in numerical order. If there is an odd number of results, the median is the middle number. If there is an even number of results, the median will be the mean of the two central numbers.

(in this course, you can set the middle value on your own).

Part 5

Have a try

Do you learn the course today?
If you learn to do it, give yourself a top quack. 
Now give you a homework assignment.
The value of the current luminance is displayed on the micro:bit dot matrix.
Children can use the mobile phone lights or turn off the lights at home to change the current brightness.

Start your little brain. Try it. 

micro:bit project

Thanks for watching !

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