



micro:bit creative lesson 17 "fruit picking"



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Content



YahBoom micro:bit module tutorial

Learning goals

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Part

micro:bit entry video tutorial



After you download the program, there will be a flickering picture on the micro:bit dot matrix, which means that the game will start. Then there will be a LED light falling down randomly (like a fruit falling down). There is a LED lamp on the bottom row (like a basket). We want to catch the fruit fallen on it. Press the A button, move it to the left, press the B button, and move to the right side. When the two touch together, it means that the basket receives the fruit and gets a point. You can play with your little buddies and see who gets more.

Hardware:

Preparation

Part 2

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• 1 X Micro: bit Board

- 1 X Micro USB Cable
- 1 X Consoles shell
- 1 X PC

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.

YahBoom micro:bit video tutorial









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micro:bit entry video tutorial

Search for blocks

Part 4



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Part 4



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Part 4

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Part 4

亚博舒能

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Combine blocks

Part 5

亚博奇能

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Lesson 18

micro:bit creative lesson 18 "Lesson 18 Ball small light"





micro:bit视频教程



Learning goals

Part

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After you download the program, turn the adjustable knob to change the brightness of the small light. Turn off the lights in the room, it will be more beautiful~ Just like in the picture in the upper right corner. Is it like a round moon?

Hardware:

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Part 2

Preparation

- 1 x Micro:bit Board
- 1 x Micro:bit expansion board
- 3 x DuPont line male to male
- 1 x LED
- 1 x Adjustable knob
- 1 x Breadboard
- 1 x Table tennis with holes
- 1 x PC
- 1 x USB Cable

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



Step2:Insert the microbit board into the expansion board and insert the expansion board on the breadboard



Everyone must distinguish between the positive and negative poles of the led light. The positive pole is connected to the VCC of the power supply, and the negative pole is connected to the GND.

(In this course, the positive pole is connected to the P1 pin of the expansion board, and the negative pole is connected to the GND pin of the expansion board.)

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Step 4: Connect the one end of No.1 DuPont line to the P1 pin of the expansion board, and the other end to the left pin of the adjustable knob; connect one end of the No.2 DuPont line to the GND pin of the expansion board, and the other end is connected to the negative pole of the LED; one end of the No. 3 DuPont line is connected to the positive pole of the LED, and the other end is connected to the middle pin of the adjustable knob.

Tip: The correct way to connect the adjustable knob is to connect it to the left and middle pins, or connected to the right pin and the middle pin. At the same time, the left pin and the right pin are unadjustable.



In this case, our ball small lights will be ready~ After powering it up and downloading the program, it will light up. Led lights will be randomly assigned to everyone, there are yellow, red, green and so on.









micro:bit creative lesson 19 "Automatic door"





Learning goals

Part

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After you download the program, please the ultrasonic module on the side of the door. If the ultrasonic module is blocked by hand (simulating someone standing in front of the door), the servo will rotate 90 degrees to open the door. After two seconds, the door will automatically close. Let's try it together.

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Preparation

Part 2

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- Hardware: 1 x Micro:bit Board 1 x Micro:bit expansion board
 - 1 x servo kit
 - 1 x Ultrasonic
 - 1 x door (Owned)
 - 4 x DuPont line female to male
 - 3 x DuPont line male to male
 - 1 x Power module
 - 1 x Breadboard
 - 1 x PC
 - 1 x USB Cable

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. Input this URL https://github.com/lzty634158/yahboom_mbit_en to get the package.





In this lesson we will use the servos and ultrasonic module. Both VCCs must be connected to 5V.

How to distinguish the positive and negative of the servo?

The brown line of servo is the negative pole, the red line of servo is the positive pole, and the yellow line of servo is connected to P2. Ultrasonic TRIG is connected to P0, ECHO is connected to P1, and everyone can use the charging treasure to supply power to the 5v power supply module. The servo, ultrasonic and micro:bit negative (GND) must be connected to the GND of the power supply.

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Part 3



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Mbit_Display

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Part 4

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Part 4

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Lesson 20

micro:bit creative lesson 20 "Colorful gesture lights"








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After you download the program, we can hold the micro:bit and use gravity sensing of mirco:bit to make different gestures to control the color of the light as well as the light up and the light off. We can see in the picture, when we pick up the micro:bit and the array is up, it will light up the white light composed of red, green and blue. In addition, different gestures can also show red, green, blue ,yellow, etc.

Hardware:

Preparation

Part 2

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- 1 x Micro:bit Board
- 1 x USB Cable
- 1 x RGB module
- 4 x Dupont line
- 4 x Alligator clip

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.Input this URL https://github.com/lzty634158/yahboom_mbit_en to get the package.



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Part 3





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Part 4

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micro:bit creative lesson 21 Target score







Hardware:

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Part 2

Preparation

- 1 x Micro:bit Board
- 1 x USB Cable
- 1 x cardboard
- 2 x ping-pang Ball

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.Input this URL https://github.com/lzty634158/yahboom_mbit_en to get the package.



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Part 3

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micro:bit creative lesson 22 "Music coin box"





In this experiment, we used a homemade carton piggy bank as shown in figure 3,4. If you need the 3D printing piggy bank shown in figure 1,2. You can contact our customer service to get 3D printed drawings.

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After you download the program, you can put coin into this box, and Micro :bit dot matrix starts counting and display, while music is played.





Hardware:

Preparation

Part 2

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- 1 x Micro:bit Board
- 1 x headset
- 1 x Infrared receiver
- 1 x Infrared sender
- 1 x box
- 7 x Alligator clip
- n x packaging tape
- 1 x 27kΩresistor
- 1 x 100Ωresistor

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.Input this URL https://github.com/lzty634158/yahboom_mbit_en to get the package.





In this lesson, we need to use the infrared pair tube. The positive and negative poles of the infrared pair tube.What is the difference? The longer pin is the positive pole, and the short pin is the negative pole. Children can connect the components with wire or alligator clips, and then you fix the infrared pair tube by tape. Finally, you need to hide all the lines inside the piggy bank.

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Part 3

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Part 4

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Part 4

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	then	🔀 Logic	
🗰 Basic		■ Variables	
O Input	● if true •	🖩 Math	💿 analog read pin P0 🗸
O Music	chen	፼ Mbit_输入类	⊚ analog write pin P0 ▼ to ↓ 1023
	else	🖨 Mbit_小车类	map 0
C Led		♀ Mbit_电机类	from low 0 from high 0 1023
l Radio		✔ Mbit_传感器类	to low D
B Loops		☑ Mbit_显示类	to high 🖡 4
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	and T	▲ Advanced	servo write pin P0 to 180
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		··· More	



Search for blocks

Part 4

亚博奇能

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Search	
III Basic	
⊙ Input	
O Music	
C Led	
I Radio	0
C Loops	pick random 0 to 4
🔀 Logic	pick random true or false
Us Variables	
🖬 Math	
••• More	

Combine blocks

Part 5

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In this expriment, the coin needs to keep the same speed. The reason for not counting and always counting is the wiring error (or the wrong resistor is used). The case of counting multiple numbers is occur, you need to modify delay time in code.



Lesson 23

micro:bit creative lesson 23 "Beating of two hearts"







This experiment requires two micro:bit board. First, you need to download the same wireless communicationcode in two micro:bits, then you should press one of the micro:bit A keys. The heart appears on another micro:bit dot matrix, when you press the B button, the heart appears on this micro:bit dot matrix, valid in the 50 meter range.



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.

Search for blocks

Part 3

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Search for blocks

Part 3

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Part 3

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C Loops				
🗴 Logic				
Variables	length of text 🖡 " abc "			
I Math	join * * *			
🖨 Mbit_小车类				
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■ Mbit_输入类	substring of 16 () from 10 of length 1000000			
▲ Advanced				
f _(*) Functions				
15) rrays				
፲ Text				
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Thanks for watching!

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