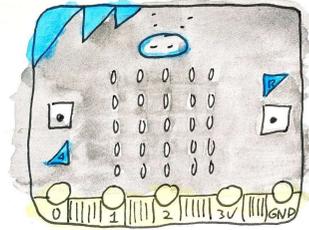
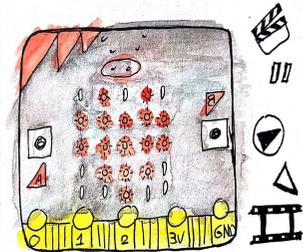


Content

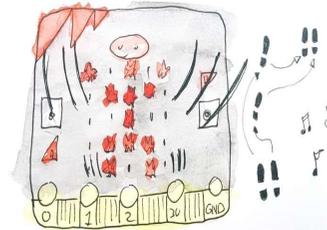
woensdag 16 mei 2018 22:37



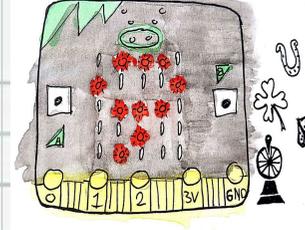
Card 1 - [Name Badge](#)



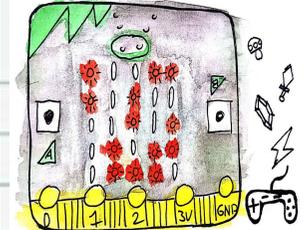
Card 2 - [Animate](#)



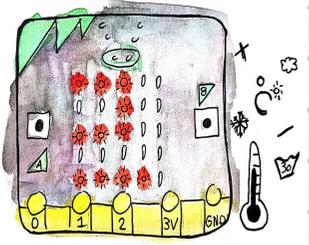
Card 3 - [Own animation](#)



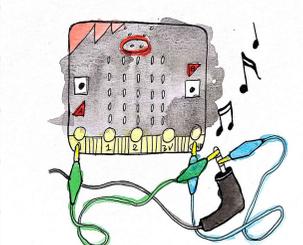
Card 4 - [Lucky number](#)



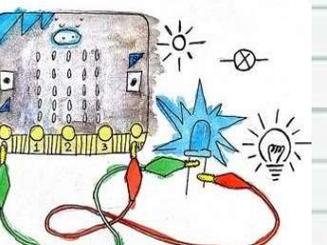
Kaart 5 - [Game](#)



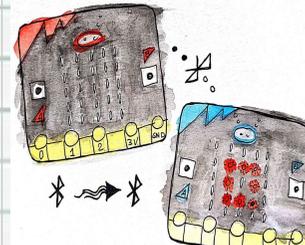
Card 6 - [Temperature](#)



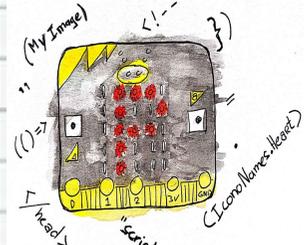
Card 7 - [Music](#)



Card 8 - [Light](#)



Card 9 - [Connect](#)



Card 10 - [Javascript](#)

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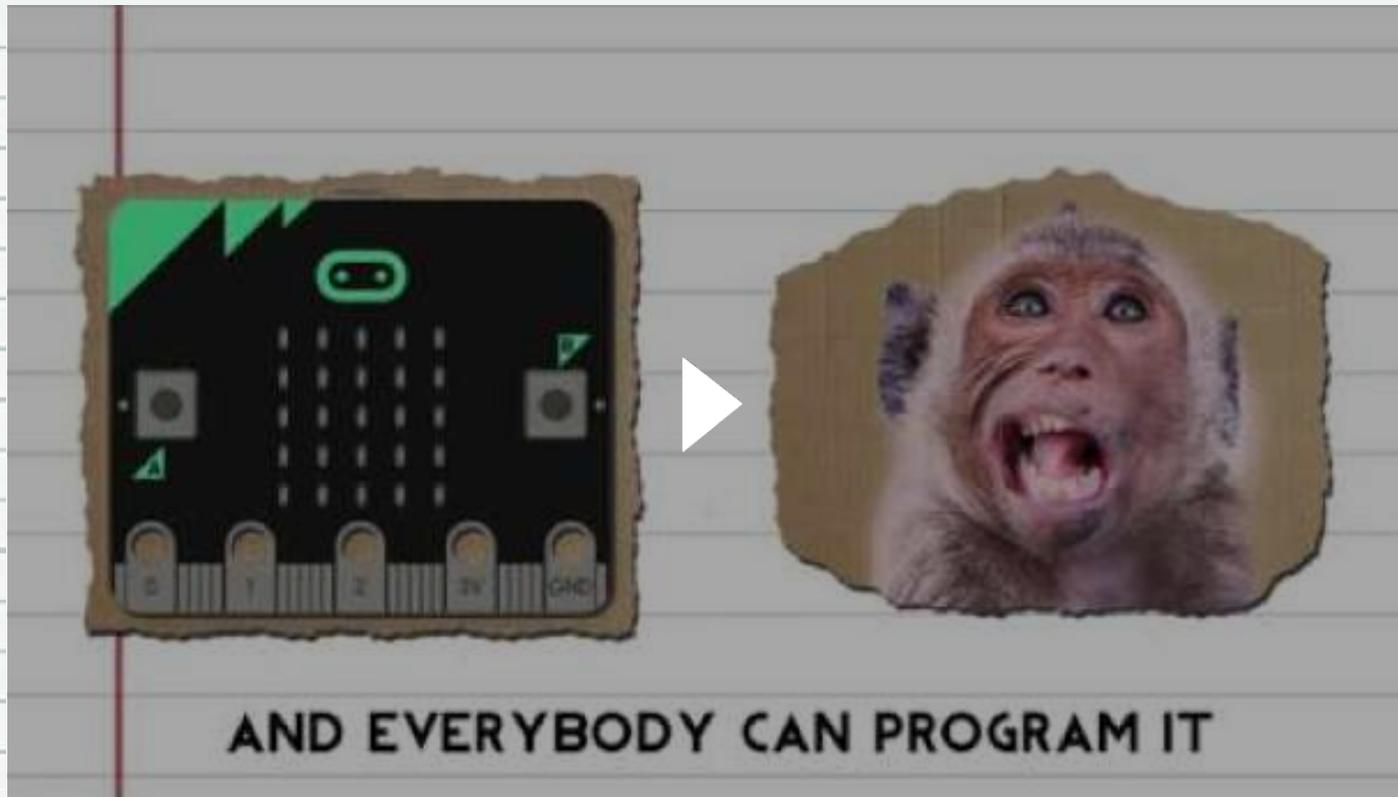


QuickStart

What is a micro:bit

woensdag 16 mei 2018 20:37

[What is a Micro:bit?](#)



WHAT?

What is a micro:bit

YouTube [channel microbit101](#)



www.makecode.com



QuickStart

DOWNLOAD

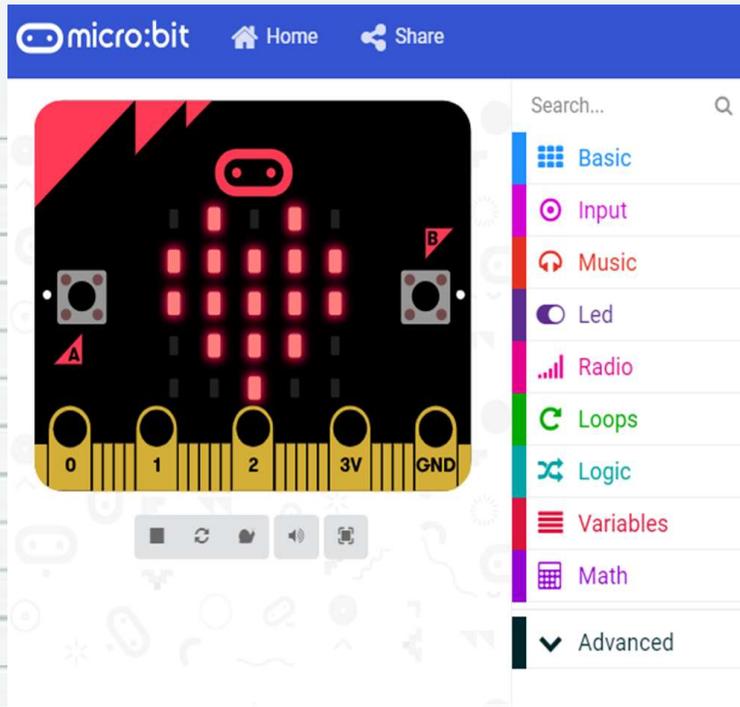
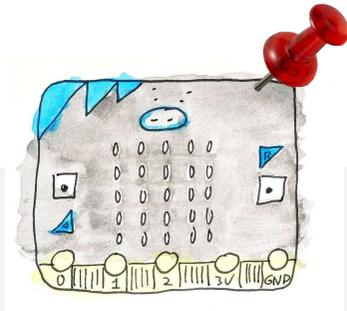
Go to [one click download](#) and see how you can download your code to the micro:bit in one click.



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Card 1 - Name badge

woensdag 6 juni 2018 22:37



```
on start
  show icon [Microbit icon]

on button A pressed
  show string [Microbit101]

on button B pressed
  show number [8]

forever
  [ ]
```

WHAT?

You will start to put your name and a number on your micro:bit.

[microbit: Maak je naambadge](#)



www.makecode.com

EXPLANATION CODE

- Drag from **Basic**; show icon into on Start
- Drag from **Input**; on Button A pressed
- Drag from **Basic**; show string into button A pressed
- Drag from **Input**; on Button B pressed
- Drag from **Basic**; show number into button B pressed

TIPS

- All the commands fit together as jigsaw puzzles
- You can delete a piece code with delete, right mouse

EXTRA

- Change the name
- Choice another icon
- Try button AB



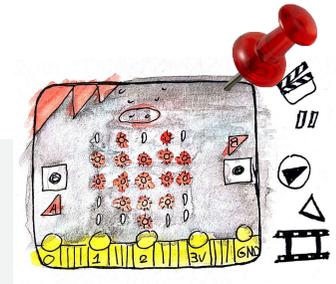
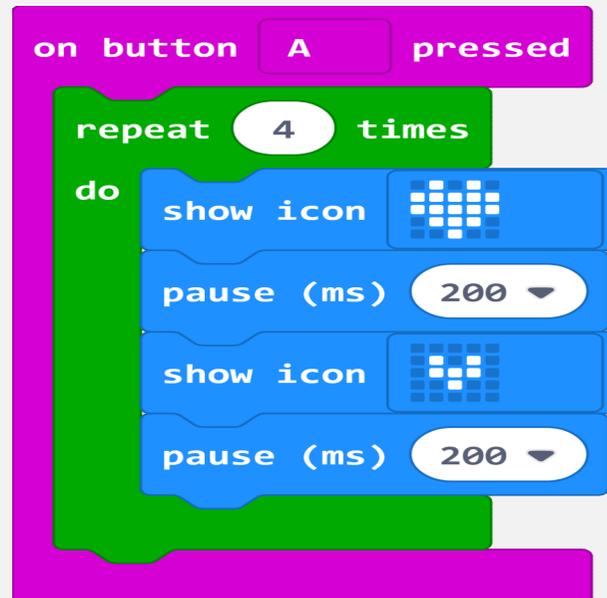
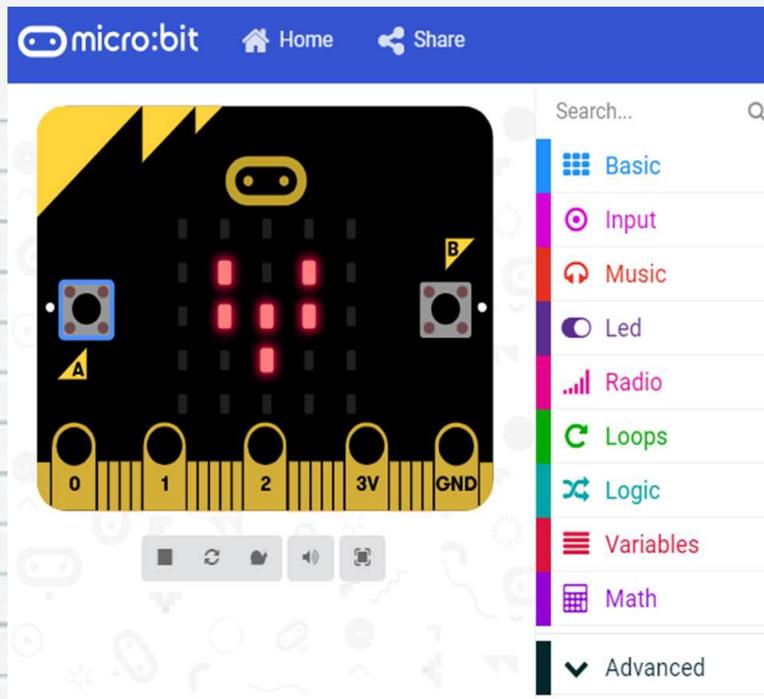
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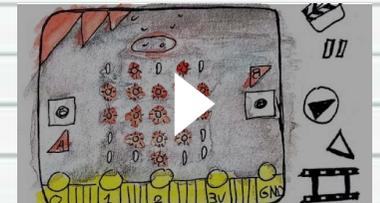
Card 2 - Animate

woensdag 6 juni 2018 22:37



WHAT?
You will make an animation.

[microbit: Maak een animatie](#)



www.makecode.com

EXPLANATION CODE

- Drag from **Input**; on button **A** pressed
- Drag from **Loops**; repeat **4** times
- Drag from **Basic**; show icon
- Drag from **Basic**; pause **200**
- Copy** the last 2 items (right mouse click)
- Change** the icon for the animation

TIPS

- 300 ms is 0,3 seconds.
- [Calculation site from milliseconds to seconds.](#)

EXTRA

- Change the number of changes
- Make your own animation ([card 3](#))
- Change the pause

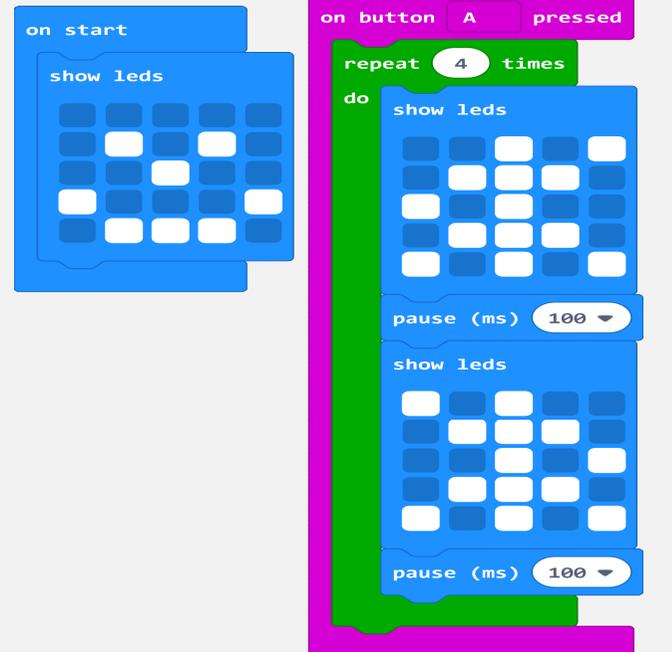
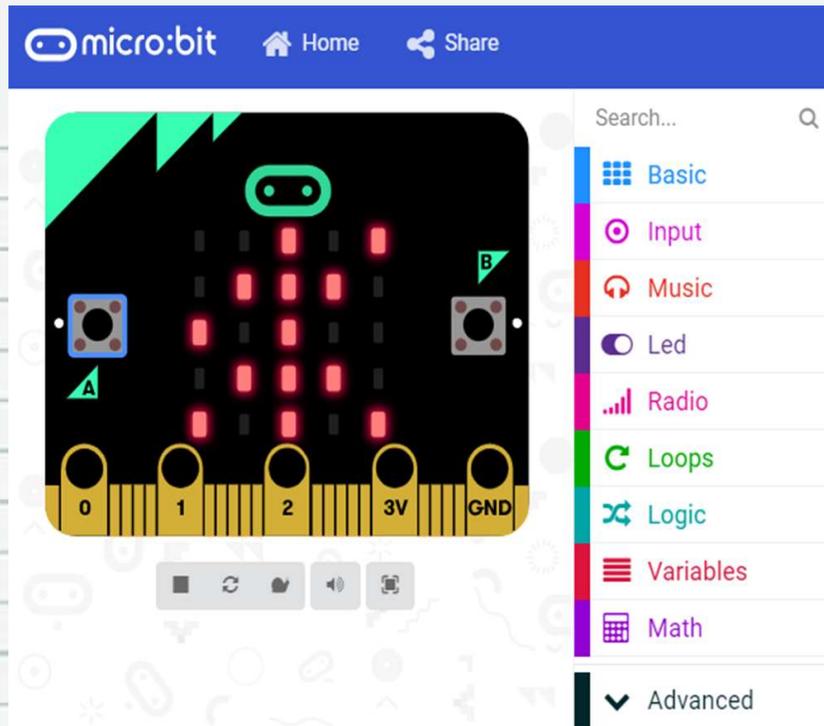
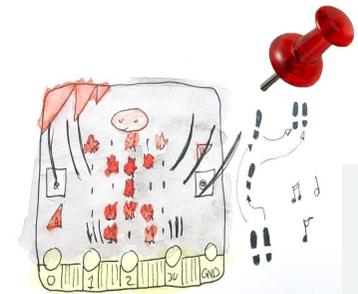


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Card 3 - My animation

woensdag 6 juni 2018 22:37



WHAT?
You will draw your own animation.

[microbit: Maak een danser](#)



www.makecode.com

EXPLANATION CODE

- Drag from **Input**; on button **A** pressed
- Drag from **Loops**; repeat **4** times
- Drag from **Basic**; show leds and make your **own** drawing
- Drag from **Basic**; pause **100**
- Copy** show leds
- Change** the **drawing**
- Copy** pause

TIPS

- If you click on **home**, you can start a **new project**.

EXTRA

- Make another animation.
- Why is the pause important?
- Put another animation under button AB or shake.



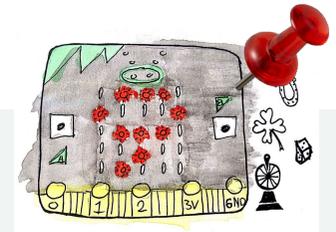
microbit101 : Een doos met materialen om alle 101 projecten om te maken en een online omgeving met alle beschrijvingen.
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QuickStart

Card 4 - Lucky number

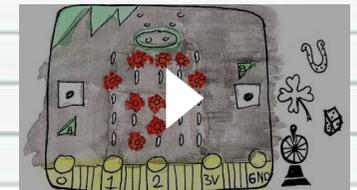
woensdag 6 juni 2018 22:37



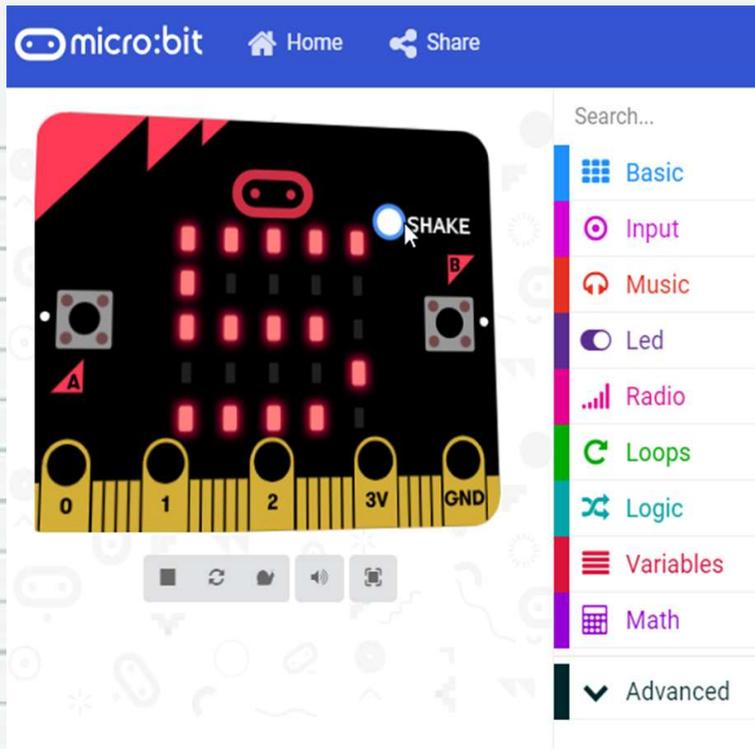
WHAT?

You will get a lucky number when you shake the micro:bit

[microbit: Wat is je geluksnummer](#)



www.makecode.com



EXPLANATION CODE

- Drag from **Input**; on shake
- Drag from **Basic**; show number
- Drag from **Math**; pick random 0 to 10

TIPS

- You can look for a command in the search above Basic.

EXTRA

- Change how you can shake
- Can you make a dice?
- How can you hack your dice?



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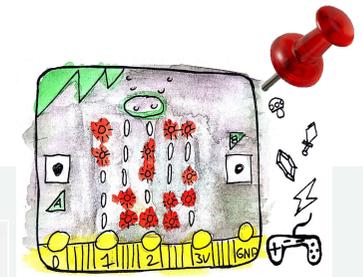


[Link to code](#)

QuickStart

Card 5 - Game

woensdag 6 juni 2018 22:37



WHAT?

You will make a small game, by pressing button A.

[microbit101 game](https://microbit101.com)



www.makecode.com

The screenshot shows the MakeCode editor interface. On the left is a virtual micro:bit board with a 5x5 grid of LEDs. The code blocks are as follows:

- on button A pressed** block containing a **plot x** block with **pick random 0 to 4** and a **y** block with **pick random 0 to 4**.
- on shake** block containing a **show leds** block.

EXPLANATION CODE

- Drag from **Input**; on button **A** pressed
- Drag from **Led**; **plot x y**
- Drag from **math**; pick **random 0 to 10**
- Put this in the space **after plot x**
- Change **10 into 4**
- Copy** pick **random** and put this **after y**
- Drag from **Input**; on **shake**
- Drag from **Basic**; **show leds**

EXTRA

- Press A to play
- Hack the game
- Play against each other



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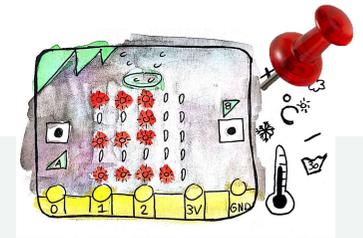


[Link to code](#)

QuickStart

Card 6 - Temperature

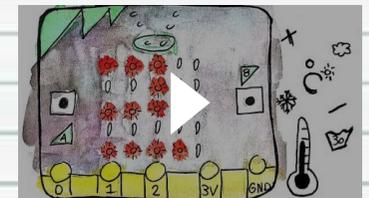
woensdag 6 juni 2018 22:37



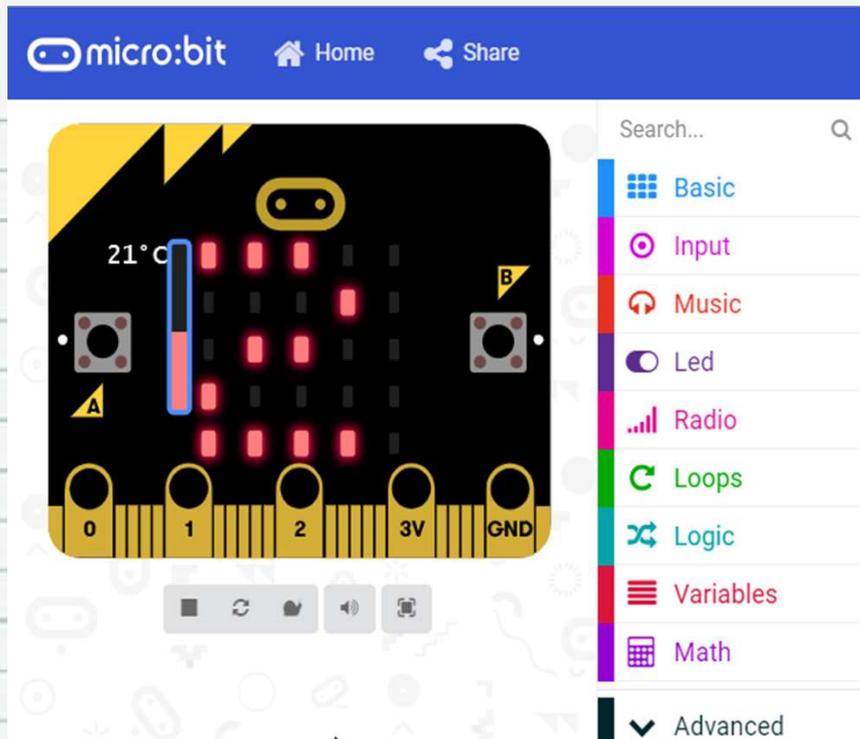
WHAT?

You will learn how to use the temperature on the micro:bit

[microbit: Temperatuur](#)



www.makecode.com



EXPLANATION CODE

- Drag from **Basic**; **forever**
- Drag from **Basic**; **show number**
- Drag from **Input**; **temperature**
- Put this **into** the **show number**

TIPS

- The micro:bit is not allowed to get wet, be careful in the rain.
- The micro:bit also measure the temperature from the micro:bit self.

EXTRA

- Put the micro:bit in the fridge.
- Put the micro:bit between your hands.
- Blow to your micro:bit to let the temperature rise.



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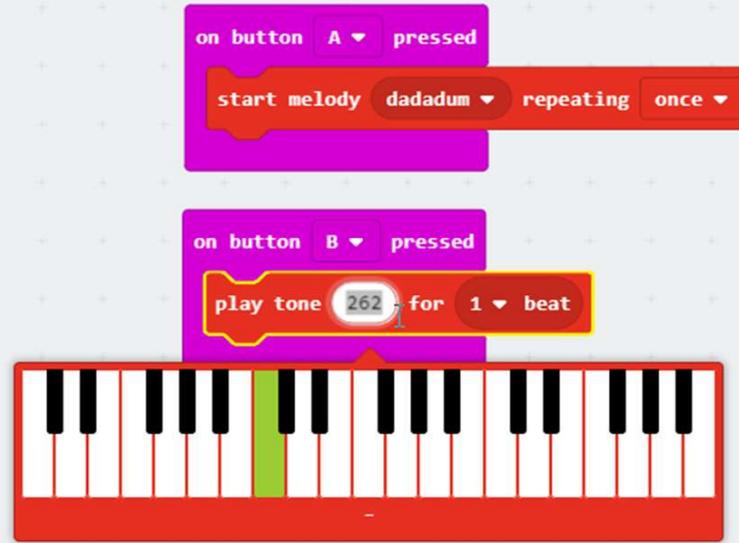
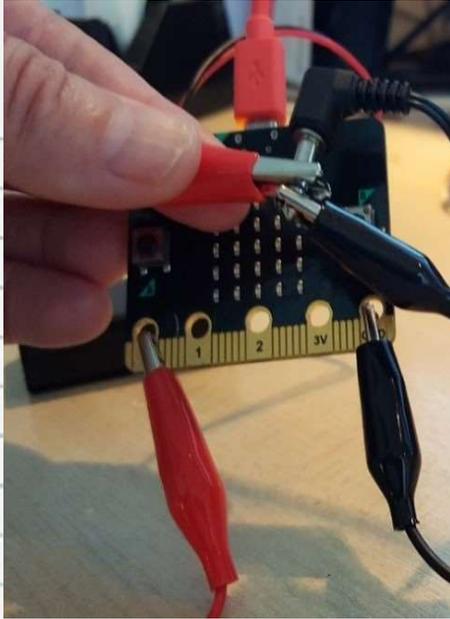


[Link to code](#)

QuickStart

Card 7 - Music

woensdag 6 juni 2018 22:37



One **cable** to **P0** and one **cable** to the **GND** . The **other** sides from the cables to your **jackplug** of your **headset** .

EXPLANATION CODE

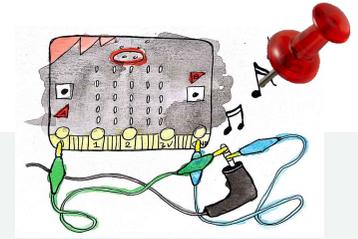
- Drag from **Input** , on button **A** pressed
- Drag from **Music** ; start **melody**
- Pick a melody
- Drag from **Input** ; on button **B** pressed
- Drag from **Music** , play **tone**
- Pick a tone

TIPS

- The cable's on the head jack are not allowed to touch each other.
- The music is always connected to P0 and GND

EXTRA

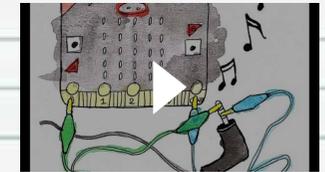
- Change a melody.
- Play two melodies.
- Play a small song



WHAT?

You learn how you can make music with your micro:bit.

[microbit: Maak muziek](#)



The cables for the **music** are always connected to **P0** and **GND** .

www.makecode.com

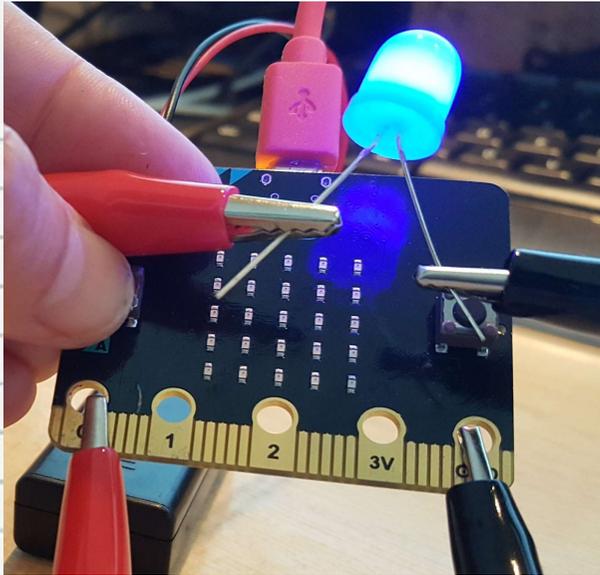


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Card 8 - Light

woensdag 6 juni 2018 22:37



```
on button B pressed
repeat 4 times
do
  digital write pin P0 to 1
  pause (ms) 100
  digital write pin P0 to 0
  pause (ms) 100
```



WHAT?
You learn how to connect a LED light to your micro:bit.

[microbit: Maak een LED-lampje](#)



The digital write pin to 1 is on
The digital write pin to 0 is off

One cable to **P0** and one cable to **GND**.

Long leg LED to P0

Short leg LED to GND

EXPLANATION CODE

- Drag from **Input**; on button **B** pressed
- Drag from **Loops**; repeat **4** times
- Drag from **Advanced**; pins; **digital write**
- Change 0 into 1** (then your light will go on)
- Drag from **Basic**; **pause**
- Copy** digital write and put it under pause
- Change 1 into 0** (off)
- Drag from **Basic**; **pause**

TIPS

- If your light is not working, change the cables to the LED light.
- You can find digital write by advanced.
- First try your LED light at GND and 3V.

EXTRA

- Change the pause.
- Can you attach another light to P0?
- Put your LED light in a drawing, smiley, mask....

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**

[Link to code](#)

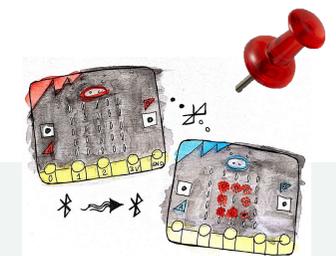
QuickStart



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Card 9 - Connect

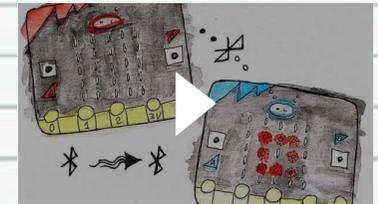
woensdag 6 juni 2018 22:37



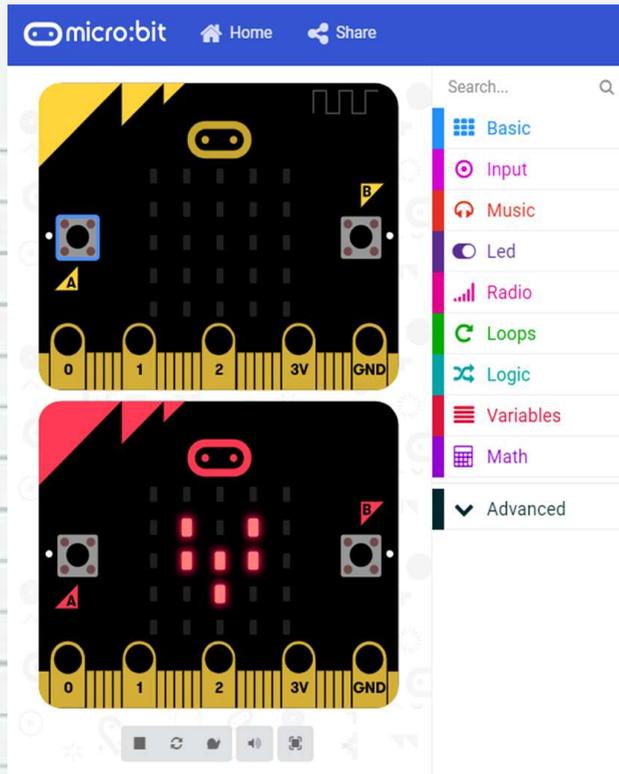
WHAT?

You learn how you can connect 2 micro:bits. They have to be on the same radio group. There are 256 different radio groups.

[microbit: Hack de microbit](#)



www.makecode.com



```
on start
  radio set group 10

on button A pressed
  radio send number 0

on radio received receivedNumber
  repeat 4 times
    do
      show icon [grid icon]
      pause (ms) 200
      show icon [grid icon]
      pause (ms) 200
```

EXPLANATION CODE

- Drag from **Basic**; on start
- Drag from **Radio**; radio set to group 10
- Drag from **Input**; on button A pressed
- Drag from **Radio**; radio send number 0
- Drag from **Radio**; on radio received
- And make an animation ([card 3](#))

TIPS

- You can make 256 different radio groups.

EXTRA

- Change a button.
- Send something by shake the other micro:bit
- Can you hack the game from [card 5](#) now?



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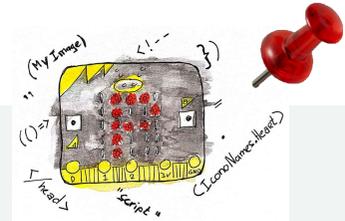
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[Link to code](#)

QuickStart

Card 10 - Javascript

woensdag 6 juni 2018 22:37



WHAT?

You learn how you can code the micro:bit with JavaScript. JavaScript is a script language commonly used to make websites interactive.

www.makecode.com

```
1 input.onButtonPressed(Button.A, () => {
2   basic.showString("Microbit101")
3 })
4 basic.showIcon(IconNames.Heart)
5 basic.forever(() => {
6
7 })
8
```

EXPLANATION CODE

- Change to **JavaScript** in the blue top line
- The JavaScript code appears
- Change by the **IconNames.Heart** for another icon

TIPS

- JavaScript gives you tips what text you can use.

EXTRAS

- Change the text between " ".
- Change Button.A in Button.B.
- Go back to the Blocks



[Link to code](#)

QuickStart



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