# BBC micro:bit Coding

# More Python Programs & Coding Tips

## Show CPU Temperature

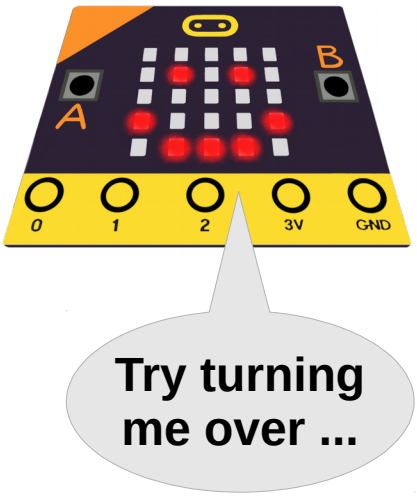
```
from microbit import *

while True:
  # obtain and show CPU temperature
  t = temperature()
  display.scroll(str(t) + 'C')
  # wait 5 seconds
  sleep(5000)
```

## Capture a Movement Gesture

```
from microbit import *

while True:
  # obtain the current gesture
  g = accelerometer.current_gesture()
  # is the micro:bit face up or down?
  if g == 'face up':
    display.show(Image.HAPPY)
  else:
    display.show(Image.SAD)
```




## Build an Accelerometer Dice Shaker

```
from microbit import *
import random

while True:
  if  accelerometer.was_gesture('shake'):
    # generate a random integer from 1 to 6
    diceNumber = random.randint(1,6)
    # show the dice number
    display.show(str(diceNumber))
    sleep(1000)
```

Can you shake a 6?

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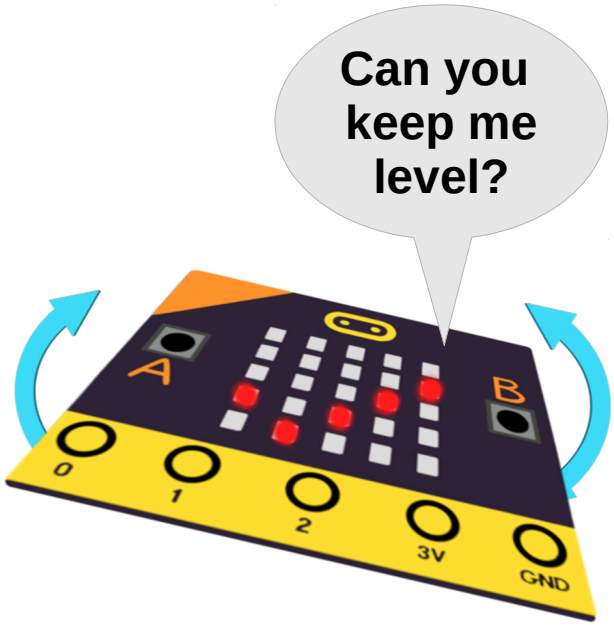
## Make a Spirit Level

```
from microbit import *

while True:
  x = accelerometer.get_x()
  val = x // 20
  if val > 0:
    display.show(Image.ARROW_E)
  elif x < 0:
    display.show(Image.ARROW_W)
  else:
    # Yes – I am level
    display.show(Image.YES)
```

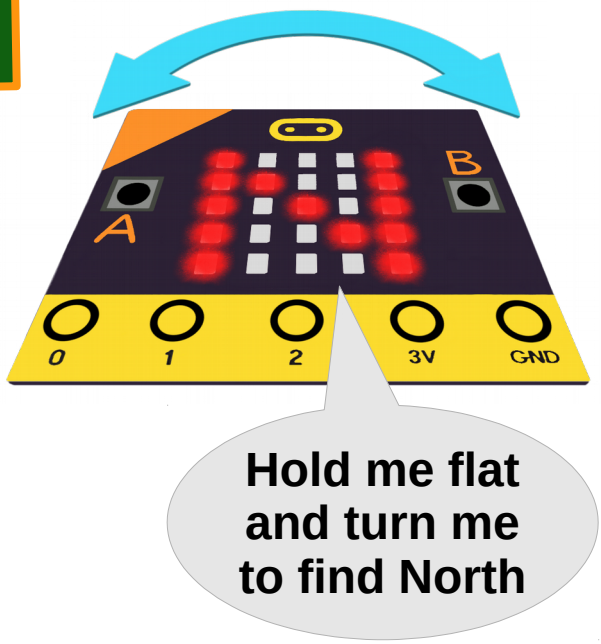



## Find North with the Compass

```
from microbit import *

# draw a circle calibration
compass.calibrate()

while True:
  sleep(100)
  val = compass.heading()
  if (val < 10 or val > 350):
    display.show('N')
  else:
    display.show(Image.NO)
```




## Some Python Coding Tips

```
# comments like this make code easier to understand

# this is how to create an endless loop
while True:
  # but make sure you indent your loop code

# str() converts integer numbers to strings
age = 9
display.scroll('I am ' + str(age) + ' years old')
```

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