

A Micro:bit Too Greedy with Micro:bit and MakeCode



Here are some screenshots of sample solutions for the resource “A Micro:bit Too Greedy”

CODE FOR BASIC 6-SIDED DIE (SHOWING NUMBERS):

A screenshot of a MakeCode script. It starts with a purple 'on shake' block. Attached to it is a blue 'show number' block, which contains a purple 'pick random' block with the numbers '1' and '6' in white circles.

OR

A screenshot of a MakeCode script. It starts with a purple 'on shake' block. Attached to it is a red 'set Dice to' block, which contains a purple 'pick random' block with the numbers '1' and '6' in white circles. Below the 'set' block is a blue 'show number' block with a red 'Dice' block attached to it.

*This code produces the same results as the one above it, but it introduces a variable, which will be helpful when attempting the extensions listed below!

CODE FOR BASIC 6-SIDED DIE (SHOWING SYMBOLS):

```
on shake
  set dice to pick random 1 to 6
  if dice = 1 then
    show leds
  else if dice = 2 then
    show leds
  else if dice = 3 then
    show leds
  else if dice = 4 then
    show leds
  else if dice = 5 then
    show leds
  else
    show leds
```

The image shows a vertical stack of MakeCode blocks. At the top is a purple 'on shake' block. Below it is a red 'set dice to pick random 1 to 6' block. This is followed by five teal 'if' blocks, each with a red 'dice' block and a white circle containing a number (1, 2, 3, 4, 5). Each 'if' block contains a blue 'show leds' block. The final block is a teal 'else' block containing another blue 'show leds' block. The 'show leds' blocks are arranged to show different die faces: 1 (one dot), 2 (two dots), 3 (three dots), 4 (four dots), 5 (five dots), and 6 (six dots).

CODE FOR CHANGING THE PROBABILITY OF CERTAIN ROLLS:

```
on shake
  set dice to pick random 1 to 8
  if <dice > >= 6 then
    show number 6
  else
    show number dice
```

*This code assigns a probability of 3/8 to rolling the number 6, and a 1/8 probability for each of the numbers 1,2,3,4,5. (ie. A random number between 1 and 8 is chosen. If it's a 6, 7, or 8, it will display a 6 as the roll, otherwise it will display the number chosen)

CODE FOR KEEPING SCORE IN THE GAME:

```
on start
  set score to 0

on button A pressed
  show string "Sc="
  show number score

on shake
  set dice to pick random 1 to 6
  show number dice
  if <dice > = 1 then
    set score to 0
  else
    change score by dice
```