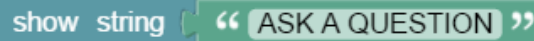


# magic 8 activity


Welcome! This tutorial will help you create a magic 8 ball on the BBC micro:bit. Let's get started!

Show a string to instruct the user how to play Magic 8! The magic 8 ball can only answer true or false questions.



show string " ASK A QUESTION "

Display the number 8.



show string " ASK A QUESTION "



show number 8

Create a condition for when the BBC micro:bit is shaken. Then use the block `clear screen` to clear the 8 from the display.



show string " ASK A QUESTION "



show number 8



on shake do



clear screen

Create a variable of type number called **randomNumber**. Set **randomNumber** to a random number with a limit of 2. Remember the random function in the math library, picks a random number from 0 to the limit, but not including the limit unless it is 0.



show string " ASK A QUESTION "



show number 8



on shake do



clear screen



set randomNumber to pick random 0 to 2

Create an if statement for the condition `if randomNumber = 2`. If **randomNumber** is 2, display the string 'Yes'

```

show string "ASK A QUESTION"
show number 8

on shake
do
clear screen
set randomNumber to pick random 0 to 2
if randomNumber = 2
do
show string "YES"
else

```

Create an if statement for the condition `if randomNumber = 1`. If `randomNumber` is 1, display the string 'No'

```

show string "ASK A QUESTION"
show number 8

on shake
do
clear screen
set randomNumber to pick random 0 to 2
if randomNumber = 2
do
show string "YES"
else
if randomNumber = 1
do
show string "NO"
else

```

If `randomNumber` is not 2 or 1, it must be 0. This is the else condition. If `randomNumber` is 0, display the string 'I don't know'

```

show string "ASK A QUESTION"
show number 8

on shake
do
clear screen
set randomNumber to pick random 0 to 2
if randomNumber = 2
do
show string "YES"
else
if randomNumber = 1
do
show string "NO"
else
show string "I DON'T KNOW"

```

Display the number 8 so users know they can ask the magic 8 ball another question!

```
show string "ASK A QUESTION"  
show number 8  
  
on shake  
do  
  clear screen  
  set randomNumber to pick random 0 to 2  
  if randomNumber = 2  
  do  
    show string "YES"  
  else  
    if randomNumber = 1  
    do  
      show string "NO"  
    else  
      show string "I DON'T KNOW"  
  show number 8
```



Excellent, you're ready to continue with the **challenges**  
(<https://www.microbit.co.uk/blocks/lessons/magic-8/challenges>)!