#4 Crazy Letters

LEVEL: ⭐

Yes, it's possible to teach letters to dance!
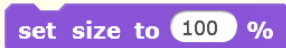
Crazy Letters

Rules of playing:

1. Click 🚩 to start and 🔴 to stop;
2. Sing or talk to computer and watch letters dance;
3. Try to use different effects to make it more creative.
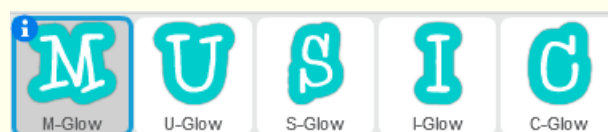
Have fun!

🖥 Try this project online:
https://scratch.mit.edu/projects/158040020/

25

The blocks you will need:

forever

change color effect by 25

set size to 100 %

turn ↻ 15 degrees

set color effect to 0

○ * ○

loudness

when 🚩 clicked

wait 1 secs

1

Create *Sprites* : this time, we will need 5 letters for MUSIC.

New sprite: 🧙 / ⬆ 📷

Click here to choose 5 sprites: M, U, S, I, and C.
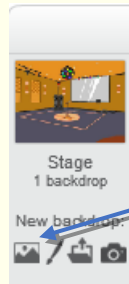
M-Glow   U-Glow   S-Glow   I-Glow   C-Glow

Place them in the middle of the *Stage*.

It's the letter's show, so we don't need the cat this time. To remove it from the stage, click the <u>right</u> mouse button on it, and then select <u>delete</u>.

Cat1

info
duplicate
delete
save to local file
hide

2

Select the *backdrop* of the *stage*: party room.

Stage
1 backdrop

New backdrop:

Click this image to select a backdrop picture: party room.

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3

M-Glow

Now we will teach letters to dance by following the *loudness* of the sound from computer's microphone.

Select letter M, and create the following blocks:

```
when [flag] clicked
set color effect to 25
forever
    set size to ( loudness * 10 ) %
    wait 0.1 secs
```

Letter M is in light blue. This will change its colour to blue. You can enter any value from 0 to 200 and choose the colour you like the most.

In *set size to*, a number less than 100 will make letter M smaller than itself, and bigger when the number is more than 100.

loudness is how loud the computer hears from you, or any sound nearby. Here we want letter M to become bigger when it's louder, or smaller when it's less loud.

4

U-Glow

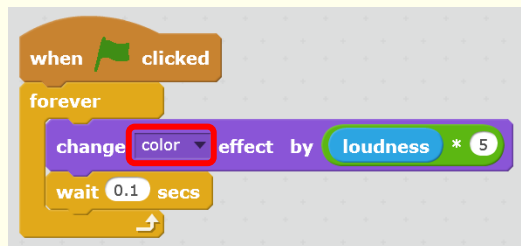Select letter U. It will spin faster or slower, when the sound is louder or less loud.

```
when [flag] clicked
set color effect to 50
forever
    turn ↻ ( loudness * 15 ) degrees
    wait 0.1 secs
```

Try some other numbers to see what is different.

5

S-Glow

For letter S, we want it to change its colour.

```
when [green flag] clicked
forever
    change [color ▾] effect by (loudness * 5)
    wait (0.1) secs
```

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6

I-Glow

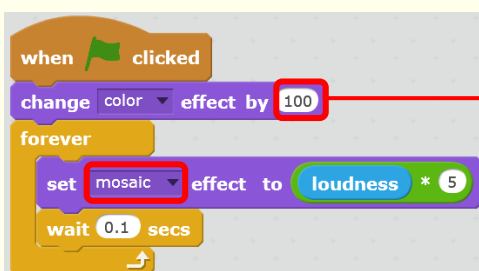For letter I, we want it to change its shape. If the sound is louder, it will become fatter, or less fat otherwise.

```
when [green flag] clicked
change [color ▾] effect by (75)
forever
    set [fisheye ▾] effect to (loudness * 20)
    wait (0.1) secs
```
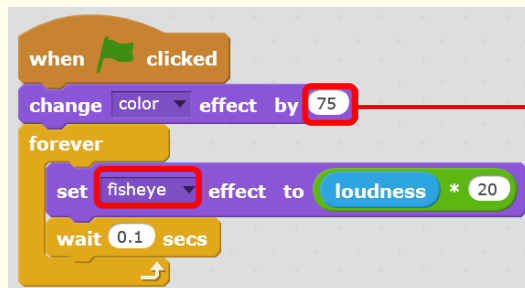
● Set the colour to be pink.

7

C-Glow

Last but not the least, for letter C, we will use the *Mosaic* effect so it will have more small copies of itself when it's louder.

```
when [green flag] clicked
change [color ▾] effect by (100)
forever
    set [mosaic ▾] effect to (loudness * 5)
    wait (0.1) secs
```

● Set the colour to be red.

[green flag] Now enjoy the show!

Knowledge nuggets

turn ↻ 15 degrees

The rule of <u>360 degrees</u>: make a full turn is 360 degrees. Any number bigger than 360 just has more full turns.

0 / 360 degree

turn right / clockwise

270 degree   90 degree

180 degree
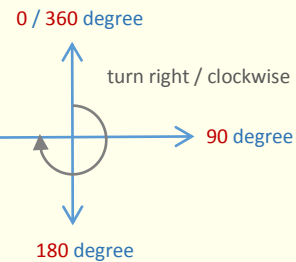
set size to 100 %

% is called *percentage*. 100% equals to 1. So if **M** is 100%, its original size, then:

M 10%   M 25% (quarter)   M 50% (half)   **M** 200% (double)

set color ▾ effect to 0

In Scratch, there are several ways to change the *effect* of a sprite:

color
fisheye
whirl
pixelate
mosaic
brightness
ghost

set fisheye effect to 0 (no effect)

set fisheye effect to 100

set fisheye effect to 200

set fisheye effect to -50

set mosaic effect to 0 (no effect)

set whirl effect to 0 (no effect)

set mosaic effect to 10

set whirl effect to 100

set mosaic effect to 20

set whirl effect to 200

set mosaic effect to 50

set whirl effect to -200

Negative numbers have the same effects.

Try other effects on the list, and pick the craziest ones for your letter dance!

Well done! I hope you enjoy the letter show!