

MAKE RANDOM SPARKLES USING SCRATCH

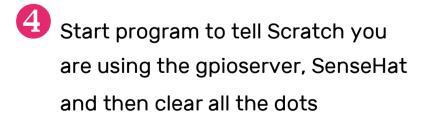


Getting started

- Start Scratch 1.4 from the Menu
- Create necessary variables:

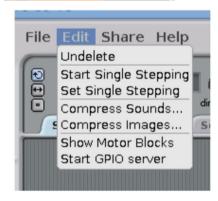
 AddOn, command, r, g, b, x, y

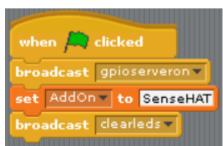
Tell Scratch you want to use the GPIO pins. To do this, click on edit and select "Start GPIO server"













Code to draw the Sparkles

Start with the code to draw one sparkle. This is a second block of code.

```
when clicked

set command to join ledpixelx 1

set command to join command join v 2

set command to join command join colour 100

set command to join command join , 100

set command to join command join , 100

broadcast command
```

This creates a command that uses the values x, y to pick a dot and the values r, g, b to select a colour. Be careful with all the green join blocks. Click the green flag

Phave a play and try different ж, у, г, д, ь values.

Then click the green flag to see the change

You have now created the code to colour one dot. Fun, but wouldn't it be better if you could colour ALL the dots. That is what you will do next.



Add the code to the first block to pick random locations (x, y) and colours (r, g, b). Then send the command to draw the pixel

```
when clicked

broadcast gpioserveron v

set AddOn v to SenseHAT

broadcast clearleds v

forever

set v to pick random 0 to 7

set v to pick random 0 to 7

set v to pick random 0 to 255

set g to pick random 0 to 255

set b to pick random 0 to 255

broadcast pixel v and wait
```

The last command is [broadcast [pixel] and wait]

This is the command that tells the other block to draw the dot, so we need to change the first line in the other block to receive [pixel] of code and include all the variables for

```
when I receive pixel v

set command v to join ledpixelx x

set command v to join command join v y

set command v to join command join colour r

set command v to join command join v g

set command v to join command join v g

set command v to join command join v g

set command v to join command join v g
```

Additional



It's all starting to look a bit busy. Wouldn't it be great if you could clear the SenseHat with a press of the [spacebar]



Challenges

- Make it so there is always more red in the dots.
- 2 Make it take more time between drawing the dots?